

Harper's International Commerce Series

Harper's International Commerce Series

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Harper's International Commerce Series

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Harper's International Commerce Series

EDITOR'S INTRODUCTION.

THE object of this series is double. In the first place it is to supply in a compact form to managers, clerks, and agents of commercial firms in all parts of the globe accurate information about the commerce, resources, and needs of the principal countries of the world ; the second, and equally important, purpose of the series is to supply to teachers and students in technical schools, colleges, and commercial Universities throughout the British Empire and the United States of America what we may perhaps call guide-books to the wealth of modern nations. No intelligent observer of commercial progress in Germany during the last decade can have failed to mark an equally rapid and simultaneous progress in the descriptive literature of industry and commerce. Every University seems to have entered into the competition, and in Germany, at any rate, a teacher of practical economics is seldom at a loss for a book ; he is more likely to be embarrassed by profusion than by scarcity. In America the production of monographs upon commercial subjects has been enormous, but these monographs, whatever their scientific merits—and they often exhibit a most laborious research—are not often suited to the uses of commercial instruction. Still less are they likely to deserve or win a place on the miserable bookshelf which too often satisfies a great mercantile or manufacturing house.

It is no doubt a mistake for the manufacturer of books to preach to the manufacturer of things ; but the best writers on economic questions are those who combine with practical instincts a broad and scientific grasp of commerce and a power of exposition. Such writers do not lecture a business man on the conduct of his business. But is it not also a mistake for the captains of industry to shut themselves up in their offices, assume pontifical airs, and refuse to

listen to the stories of the progress made in other countries and to descriptions of other methods than their own? The shrewdness of the average English commercial traveller does not always make up for his ignorance. His knowledge of men does not always make up for his contempt of books. His readiness to appreciate concrete economies and inventions is admirable, but he would do still better had he the will and the opportunity to study descriptive economics, and to draw lessons from the abstract precepts and principles of the writers and thinkers who have devoted themselves to discovering the mechanism of the production and distribution of wealth.

After all, as Mr. John Morley once told the Midland Institute at Birmingham, long before the establishment of a commercial University (with a Chair of Commerce) in that city, the best thing that can happen to a young man of average abilities is that, after following the elementary and higher education in his own town, he should, 'at the earliest convenient moment, be taught to earn his own living.' To earn a living by honest work should be the elementary aim of every good citizen; but let the wage-earning and the profit-seeking be preceded by a training which will make his daily work an intelligible part of an intelligible whole, and help him to continue his education through life, to unravel bit by bit the baffling mysteries of Nature's laws and man's disobedience.

There is probably no form of literature more generally read than biography. The success of others is an incentive to action. We love to read the lives of great men. We learn from their failures and successes. The budding politician follows the career of the statesman. The young man entering a business or profession is encouraged by 'men of invention and industry.' The spirit of rivalry and emulation is strong and honourable, and it exists between communities and nations as well as between individuals. Happily, nations as well as individuals gain by the inventions, the industry, and the wealth, of their competitors; but the benefit would be far greater if there were more willingness to learn. 'Made in Germany' should be not a bogie, but a stimulus. Nations of invention and industry should be vehicles of instruction. Their successes are worthy of study and emulation. We must watch the developments of commercial policy, says Lord Rosebery. We must study commerce, says Mr. Chamberlain, in Universities founded for that purpose. Mr. Bryce, who knows as much of higher education

as any living statesman, concurs. Mr. Carnegie, the prince of manufacturers, is also the Mæcenæ of commercial education.

The object, then, of this commercial series is to provide guidance by describing the modern conditions under which the great nations of the world are competing for its markets, exchanging their products, utilizing their own agricultural and mineral resources, and, as they progress in wealth and population, making ever new and larger demands upon the products of other countries.

The commercial series begins with descriptions of Great Britain, India, Japan, and the United States of America. It is hoped in time to include all the principal countries of the Old and New World. Each, it is hoped, will have its special value to traders, whether they are already engaged in trade with a particular country or whether they are on the look-out for new markets. Large importing and exporting merchants should welcome the advent of small and compact volumes containing statistical and other information for which they would have to search through many blue-books and consular reports. An immense amount of time would be saved by boys and young men who are entering importing and exporting houses if they could first master the contents of a book like that of Mr. Harold Cox on Great Britain, or of Mr. Tozer on India, and we believe that such books will be much more useful to the teacher than the small works upon elementary economics which were offered with such unsatisfactory results to the youth of the last generation. What is the good of driving into the minds of boys or girls of fourteen, or sixteen, or eighteen, abstract definitions of value or abstract theories of exchange? They would be far better engaged in arithmetic or Euclid, where they have counters, figures, and diagrams to help them. For the same reason, theology often proved a better training for the mind than the old formal logic, because it had the advantage of a close relation to living controversy. We do not in the least depreciate the value of political economy (it should be a principal instrument in the higher education of our citizens); we are simply discussing how it should be taught, how it should be made most interesting, and how it should be made most useful. Minds exceptionally well informed, or with exceptional powers of abstract reasoning, may no doubt be given theories 'neat,' but even then it would be better for the theories to be diluted with copious illustra-

tion. Let the mind first be fed with facts, with a description, for example, of the economic framework of a nation, its agriculture, its mineral resources, its manufactures, its railways, its harbours, banks, currency, weights and measures, and foreign trade. The means also, by which it raises its revenue and protects or obstructs its commerce should be made known. If the governing classes, the manufacturing classes, and the journalists of the great nations of the world were acquainted with the records of their own economic progress, and of their neighbours, they would be able, even if they had never committed to memory a definition of marginal utility or of quasi-rent or of the law of diminishing returns, to avoid blunders which cause year by year vast and irretrievable losses to the whole world. It is satisfactory to observe that the new London University, in which is incorporated the London School of Economics, has adopted in its curriculum for the faculty of economics and political science (including commerce and industry) the very idea upon which we are now laying so much stress—that is to say, the advantage of applied over abstract economics. In the first year students are expected to make elementary applications of statistical methods, to study the main outlines of the organization of industry and commerce, and to devote themselves to commercial geography. In the second and third years they are expected to acquaint themselves with public finance and with constitutional or commercial law; they may take up banking and currency, or the organization of transport, or international trade, or systems of insurance, or the public administration of a particular country. A school similar to the London School of Economics is now being built up in New York, and there is little doubt that the main outlines of the curriculum devised by the London University under the guidance of many distinguished men and women, who form its Senate, will be more and more widely adopted in those great centres of the world's commerce which must inevitably become also centres of commercial education.

F. W. H.

JAPAN[•] AND ITS TRADE

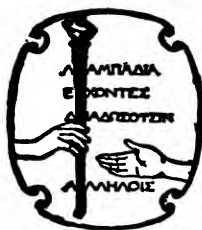
JAPAN

AND ITS TRADE

BY

J. MORRIS

AUTHOR OF 'ADVANCE, JAPAN!' 'WAR IN KOREA,' ETC.



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PREFACE.

THIS effort to set forth in concise terms the commercial position of the Japanese Empire in relation to the other countries of the world may prove, it is hoped, not merely serviceable to the manufacturer whose sphere of operations already embraces the Far East, but may also interest those whose acquaintance with the trading possibilities of Japan as a producer as well as a purchaser is imperfect. It is the more essential that an accurate understanding should be arrived at in regard to commercial affairs now that the Governments of Japan and Great Britain have entered into an alliance to maintain in the Far East the policy of the open door for trade and absolute equality of access and privileges for all comers.

The financial situation in Japan has been the subject of so widespread a misapprehension that it is perhaps too much to expect that a true appreciation of Japanese wealth will be reached even now, for there is a common, though erroneous, belief that the nation's resources are inadequate to meet that increased expenditure to which she is prompted by her ambitions.

Yet if the statistics that are to be found in the following pages be fairly weighed and their bearing upon this momentous question duly considered, the reports tending to minimize the commercial influence which Japan is capable of exerting cannot very much longer obtain credence.

The Japanese themselves are inclined to marvel at the extent of the wealth of their country, which is beneath even more than above the surface, and obviously capable of advantageous development in the near future. They have been laying out money in machinery of every description during the past thirty years, and are now beginning to feel the benefits of a wise investment of

capital. With their phenomenally cheap labour, excellent of its kind, they propose to turn that machinery to substantial account.

It is a mistake to suppose that Japanese competition is likely to injure the position, even in the extreme Orient, of those old-established industrial nations in the hands of which the bulk of the trade really lies. Over Korea, indeed, Japan has always exercised commercial control, and had she a greater supply of money it is certain that she would employ it there and elsewhere to good purpose.

But as Japan's immediate need is that of ready capital to prosecute her various enterprises—and this want is not to be wholly met without recourse to extraneous aid—notwithstanding the productiveness of her mines, she has everything to gain by the spread of accurate information concerning her mineral and other resources, and the facilities which she offers to those ready to embark in her undertakings. Facts are stubborn things, and in this unpretentious volume facts alone are relied upon to interest the reader who may consult its pages. The phenomenal increase that has in recent years taken place in Japan's trade with America and the United Kingdom was bound to attract attention to the commercial possibilities of the Far East, and such progress was none the less impressive in that it totally negated the dolorous predictions which once were very freely indulged in.

The abolition of foreign jurisdiction in 1899 placed all dwellers in the Japanese Empire on terms of absolute equality. Three years have passed, and despite some perhaps natural apprehensions of friction, there has been little or nothing to complain of regarding the manner in which Japanese law has been applied, either to the person or to property. Care was taken that its provisions should adequately be made known, and translations of the commercial law, by Mr. J. H. Gubbins, C.M.G., of the British Consular Service, and also by Herr Ludwig Lönholm, and of the Criminal Code, by Mr. J. E. de Becker, were from the first available for the instruction and guidance of all concerned. Upon one subject alone has any thing approaching dissatisfaction been experienced, and it is that of the extreme difficulty of reconciling the views of Japanese and foreigners in respect of the tenure of land. In attempting to establish himself in commerce in any part of the Japanese Empire the foreign merchant or manufacturer is confronted with the initial

difficulty that perpetual leases, pure and simple, are not yet granted to aliens. The Japanese authorities insist that a sale of landed property to a foreigner shall be registered as a transfer of 'superficies,' which confers no real and perpetual right of property, and is therefore valueless for the investor's purpose when the business or undertaking that it is proposed to carry on necessitates the sinking of substantial sums of money in expensive plant, and the construction, it may be, of costly buildings. The sale of land must be an out-and-out sale, divested of all risk of its reverting to former or other owners at the will or caprice of any individual or corporate body. Failing this, foreign investors will not be willing to acquire on a large scale a direct interest in Japanese commerce. It is for those who frame its laws to declare whether they will have foreign capital on these terms or not. The United Chambers of Commerce in Japan, recognising that in order to bring about the greatest expansion of trade there must be a complete abolition of all that constitutes a check or hindrance thereto, resulting from obnoxious enactments, have petitioned their Legislature to repeal the clause which in the Land Act debars foreigners from acquiring property in perpetuity. It is much to be hoped, for the future of Japan, that the prayer of these petitioners, who view the question from the standpoint of business men, will be heard, and relief forthwith given, for this appears to be the chief remaining obstacle to the commercial development of the empire.

A step in the right direction was unquestionably taken when the law promulgated in March, 1900, extended the scope of the Mining Regulations, and made it lawful for companies consisting either wholly of foreigners, or partly of foreigners and partly of Japanese, to engage in mining enterprises. Public feeling is palpably inclined towards the removal of the restrictions complained of, and the inauguration of a thoroughly liberal policy on the part of the Government should tend to promote cordial goodwill between the people of Japan and the foreigners who live and trade with them.

As to the opportunities that are presented for industrial enterprise, it is necessary merely to glance at the partially-worked coal-fields of the Island Empire to be thoroughly assured upon this point.

The north-western portion of the island of Kiushiu seems to be rich to excess in coal deposits, and there are, it is declared, four

large fields of coal in Yezo, the largest, which takes its name from the Ishikari River, having an area of approximately 2,400 square miles. The Geological Department at Tokio has knowledge, it is said, of no fewer than eighteen coal-fields in the main island of Nippon, and there are known to be two in Shikoku. Altogether it is well within the mark to ascribe to Japan the possession of 5,000 square miles of coal-fields, in which the seams are from 8 feet to 18 feet thick.

There were, on a recent computation, some 400 iron mines at work, and over 500 copper mines, four of which yield 50 per cent. of the total output of copper for the empire.

To turn these natural advantages to the best account is the aim and ambition of every Japanese; but better means of transportation are needed, more mechanical skill in mining, and more capital to support the enterprise and energy which undoubtedly are inherent in the Japanese character.

Few will be disposed to deny, all things considered, that for a population of over forty-six millions, inhabiting a fertile country, with mineral and other wealth sufficient for its needs, and its communications perfected under favourable physical conditions, there should be a great and prosperous future. In the following pages an effort has been made to marshal the facts which relate to the commerce and industry of the Japanese Empire in such order as will enable the merchant and manufacturer in particular, and the public in general, to judge of the possibilities which are in store for those who may embark in trade with that rapidly rising land of the Far East.

The author acknowledges his indebtedness to the Statistical Bureau of the Imperial Cabinet at Tokio for details furnished in M. Hanabusa's extremely useful compilation entitled '*Résumé Statistique d' l'Empire du Japon*' for 1901; to the '*General View of Commerce and Industry in the Empire of Japan*,' prepared for the Paris Exhibition of 1900; to Count Matsukata's deeply-interesting '*Report on the Adoption of the Gold Standard in Japan*'; and to His Excellency Viscount Hayashi, the Japanese Minister in London, and Mr. Minoji Arakawa, Consul-General for Japan, for much valuable information and cordial assistance throughout.

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JAPAN AND ITS TRADE

SECTION I. POPULATION.

THE most recent calculations show that the population of the Japanese Empire, inclusive of Formosa, numbers

46,444,524,

and the average for the whole country is 288·6 per square mile.

It is densest in Awaji, that island near Kobé which lies athwart the 'Inland Sea,' or, as it is really named at this part, the 'Harima Nada.'

Awaji has a superficies of $218\frac{1}{2}$ square miles, and supports a population of 194,710, thus averaging 892 to the square mile, or rather more than treble the average for the whole of Japan. On the other hand, the chain of islands stretching from Yezo towards Kamtchatka, named on foreign maps the Kurile Isles, is the most sparsely inhabited portion of the Empire, the average being one person only to three square miles of territory. Formerly nineteen of these islands belonged to Russia, but they were transferred to Japan in 1875 in exchange for the southern half of the adjacent island of Saghalin. The total area of the Kuriles—known to the Japanese as *Chishima*, literally, the 'thousand isles' (there are in reality but thirty-two)—is 6,146 square miles, and the total population is set down as 2,115.

Yezo, which is the most northerly of the four large islands constituting the Japanese group, and the second in area, has an average

population of twenty to the square mile, aborigines (the Ainos) included.

In Nippon, which may be termed the mainland, Kiushiu, to the west thereof, and Shikoku, to the south, the average does not greatly vary, the number of people per square mile being respectively 380, 403, and 429.

These three large islands, together with Yeso and the Kuriles

THE POPULATION OF JAPAN.

Year.	Males.	Females.	Total.	Rate of Increase Per Cent.
1881	18,598,998	18,101,120	36,700,118	0·94
1882	18,755,242	18,262,060	37,017,302	0·86
1883	18,954,770	18,496,994	37,451,764	1·17
1884	19,157,877	18,711,110	37,868,987	1·11
1885	19,300,261	18,850,956	38,151,217	0·75
1886	19,451,491	19,055,686	38,507,177	0·93
1887	19,731,732	19,337,953	39,069,691	1·46
1888	20,008,445	19,598,789	39,607,234	1·38
1889	20,246,336	19,825,684	40,072,020	1·17
1890	20,431,097	20,022,364	40,453,461	0·95
1891	20,563,416	20,155,261	40,718,677	0·66
1892	20,752,366	20,337,574	41,089,940	0·91
1893	20,906,465	20,481,848	41,388,313	0·73
1894	21,122,899	20,690,316	41,813,215	1·03
1895	21,345,750	20,924,870	42,270,620	1·09
1896	21,561,023	21,147,241	42,708,264	1·04
1897	21,823,651	21,405,212	43,228,863	1·22
1898	22,072,758	21,688,057	43,760,815*	1·23

* Add for Formosa and the Pescadores: 1898, males—1,427,885; females—1,255,824; total—2,683,709. Grand total—46,444,524.

Chain, make up 90·4 per cent. of the total area of the Empire, and Formosa claims 8·33 of the remainder.

Tsushima, the western outpost of Japan towards Korea, has a population of 34,000, and, having regard to its limited area (266 square miles), is by no means to be viewed as thinly peopled, the average being 128 per square mile.

The Bonin group of islets, lying in 27° S. Lat. and 142° E. Long.,

at a distance of more than 600 miles from the Japanese coasts, also form part of the Empire, and are inhabited by over 2,500 people. The combined area of the scattered units of this little-known archipelago is, roughly, 27 square miles.

The Loo-choo Islands, which have since 1879 been included in the Japanese Empire, and are given the name of Riu-Kiu, number fifty-five in all, with a total area of 934 square miles, and possess a

DISTRIBUTION OF POPULATION.

Principal Islands.	Number of Isles adjacent thereto.	Population.	Proportional Area.	Average per Square Mile (approx.).
1. Nippon - - -	166	32,980,216	53.84	380
2. Shikoku - - -	75	3,013,817	4.36	429
3. Kiushiu - - -	150	6,284,439	9.67	403
4. Hokkaido (Yeso) -	—	608,040	18.70	20
5. Chishima (Kuriles)	32	2,115	3.82	1 to 3
6. Sado-Shima - - -	—	114,756	0.21	340
7. Oki-Shima - - -	1	35,734	0.08	272
8. Awaji-Shima - - -	1	194,710	0.14	892
9. Iki-Shima - - -	1	36,963	0.03	714
10. Tsu-Shima - - -	5	33,956	0.17	128
11. Riu-Kiu (Loo-choo) group - - -	55	453,550	0.58	482
12. Ogasawara (Bonin) group - - -	20	2,519	0.02	93
13. Tai-wan (Formosa)	29	2,634,421	8.33	193
14. Hoko-to (Pescadores) - - -	47	49,288	0.05	573
TOTAL - - -	596	46,444,524	100.00	288.6

population of 453,550. They are therefore more densely peopled than Shikoku, and much more so than Formosa, which lies immediately to the south of them.

The tables on pp. 2 and 3 will show—

- (a) The total population, male and female, for each year from 1880 to 1898, with the percentage of annual increase; and
- (b) The distribution with relation to the component parts of the Empire.

DENSITY.

To the Square Mile the
Population is :

In the Provinces of :

Below 5 -	Hokkaido (Yeso) only.
5-200 -	Mutsu, Ugo, Uzen, Rikuchiu, Rikuzen, Iwaki, Iwashiro, Hida, Hiuga, and the islands of Goto and Tsushima.
200-300 -	Bungo, Tosa, Iwami, Hoki, Mimasaka, Inaba, Tajima, Tango, Wakasa, Kii, Shinano, Kai Kotsuke, Shimotsuke, and the Oki Islands.
300-500 -	Echigo, Etchui, Sado Island, Echizen, Noto, Hitachi, Suruga, Totomi, Mikawa, Idzu, Mino, Omi, Ise, Shima, Iga, Yamato, Tamba, Harima, Bichiu, Bingo, Idzumo, Aki, Nagato, Iyo, Awa, Buzen, Higo, Satsuma, Osumi, and the islands off the Idzu and Osumi coasts.
500-1,000 -	Shimosa, Kadzusa, Awa (Gulf of Tokio), Sagami, Kaga, Awaji Island, Bizen, Suwo, Hizen, Chikugo, Chikuzen, and Iki Island.
Over 1,000	Musashi, Owari, Sanuki, Yamashiro, Settsu and Idzumi.

It should be noted in this connection that the provinces that are shown to be most densely populated include *Musashi*, which contains both Tokio and Yokohama; *Owari*, in which is situated Nagoya; *Settsu*, in which are Kobe and Osaka; and *Yamashiro*, in which is Kyoto.

NOTE.—By December 31, 1898, several other towns had increased their population so as to rise above the 30,000 limit, and should therefore be included in the list of 'Chief Towns,' of which the standard accepted is 30,000 or more inhabitants.

These other towns were :

Mito	-	-	-	33,778.
Tsu	-	-	-	33,287.
*Himeji	-	-	-	35,282.
Sapporo	-	-	-	37,482.
*Saga	-	-	-	32,753.
*Matsumoto	-	-	-	31,324.
Takasaki	-	-	-	30,893.
*Yonezawa	-	-	-	30,719.
*Nara	-	-	-	30,539.

* Below 20,500 in 1895.

CHIEF TOWNS AND GROWTH OF POPULATION.

Towns.	Provinces in which situated.	Population, December 31.		
		1892.	1895.	1898.
Tokio -	Musashi -	1,180,56	1,268,93	1,440,12
Osaka -	Settsu -	479,546	487,184	821,231
Kioto -	Yamashiro	308,261	340,10	353,131
Nagoya	Owari -	185,776	215,081	244,145
Kobé -	Settsu -	148,621	161,131	215,781
Yokohama	Musashi -	143,754	170,252	193,762
Kanazawa	Kaga -	92,239	88,877	83,662
Hiroshima	Aki -	90,901	100,011	122,301
Sendai	Rikuzen -	70,558	82,420	83,325
Nagasaki	Hizen -	63,038	72,301	107,421
Hakodate	Oshima -	60,38	50,314	78,040
Kumamoto	Higo -	59,089	69,828	61,463
Tokushima	Awa -	62,218	60,817	61,501
Toyama	Etchui -	58,761	58,327	59,558
Fukuoka	Chikuzen -	56,003	60,762	66,190
Kagoshima	Satsuma -	55,812	55,197	53,481
Wakayama	Kii -	55,955	57,542	63,667
Okayama	Bizen -	50,114	53,810	58,025
Niigata	Echigo -	49,884	50,480	53,363
Sakai -	Idzumi -	46,566	47,631	50,203
Fukui -	Echizen -	41,699	44,128	44,286
Shidzuoka	Suruga -	36,343	38,060	42,172
Matsuyama	Idzumi -	45,526	34,928	34,651
Utsunomiya	Shimotsuke	33,334	36,802	32,069
Takamatsu -	Sanuki -	35,594	34,277	34,416
Kochi -	Tosa -	34,533	38,279	36,511
Matsuyama -	Iyo -	34,762	33,257	36,545
Otaru -	Shiribeshi -	*	34,586	56,961
Kofu -	Kai -	33,408	35,111	37,561
Shimonoseki	Nagato -	33,592	35,961	42,786
Mayebashi	Kotsuke -	32,957	34,283	34,495
Gifu -	Mino -	32,406	31,307	31,942
Nawa -	Riu-kiu(Loochoo)	44,228	47,005	35,453
Morioka	Rikuchiu -	32,044	32,661	32,989
Hirosaki	Mutsu -	30,897	31,144	34,771
Otsu -	Omi -	31,279	32,766	34,225
Yamagata	Jzen -	*	31,129	35,300
Takaoka	Rikuchiu -	30,118	30,876	31,490
Nagano	Shinano -	*	33,675	31,319

Less than 30,000.

The variations are mainly interesting as showing how much the introduction of foreign machinery and methods of manufacture has affected the distribution of the population. Towns which were comparatively obscure have risen suddenly into prominence by reason of their having become the seats of particular industries, the prosecution of which affords employment for a largely increased number of inhabitants, mainly artisans and their families.

Conversely the attractions of these more flourishing centres of trade have operated against the growth of some towns which previously were populous, and they are now showing a diminution, though the falling away is never so noticeable, nor the cases so numerous, as to call for special remark.

The advance of *Osaka* in three years from 487,184 to 821,235 was phenomenal, and was directly ascribable to the establishment of Western industries and manufactures. Cotton-spinning and weaving, wood and iron ship-building, the production of cigarettes and matches, beer-brewing, and a variety of other enterprises, have taken firm hold of the minds of its progressive citizens, and a steady improvement is exhibited year by year in the quantity and quality of output sufficient to justify the most sanguine expectations.

Nagoya, at the head of Owari Gulf, one of Japan's most thriving cities, has increased the number of its inhabitants by 60,000 in six years, and continues to grow rapidly.

Kobé, with an addition to its population of 54,650 in three years, is emulating at a distance the progress of *Osaka*, and the same causes are at work. *Kobé* has become in like manner a centre of the ship-building trade, and both there and at *Osaka* the stimulus imparted to this industry by the working of the Navigation Subsidy Law, referred to elsewhere, has been most marked.

Yokohama, having added precisely 50,000 to its numbers in six years, has grown steadily and satisfactorily, but with only half the rapidity of its rival in the south. *Yokohama* derives its sound and unmistakable prosperity in great part from the trade carried on with the provinces skirting the peerless mountain *Fujiyama*, a region which may be said to form the hinterland of *Tokio Gulf* and *Odawara* and *Suruga Bays*.

Hiroshima added considerably to its normal population at the time of the war with China, when it was the terminus of the railway southward from the capital, and the base from which the

several expeditions for service in Korea, Manchuria, and Shantung fitted out. It has grown rapidly ever since, though it was always a busy mart, and had an extensive junk trade. The proximity to Hiroshima of Kuré, a great naval depot, and the Naval College at Yetajima Island, has no doubt tended to increase its importance as a commercial centre.

Nagasaki, it will be observed, has taken a huge stride forward during the period indicated, particularly since 1895. As the oldest port, dating from pre-Restoration days, it is satisfactory to see that its younger competitors, though they temporarily dimmed its lustre, failed to extinguish that activity which of old characterized its enterprises. On the contrary, its ship-building, and, in a lesser degree, its coal trade, both continue to flourish and to attract an exceedingly hardworking and praiseworthy class of resident to its vicinity. The total population has risen 50 per cent. in three years.

Hakodate, one of the oldest of the 'Treaty Ports,' likewise added 50 per cent. to its figures in the period 1895-98, which is a fact to be set down to the credit of the Colonization Department. Yeso, now known as Hokkaido, is gradually being peopled, and as Hakodate is the principal port, both commerce and population gravitate in its direction.

Otaru, a port on the north-west coast of Yeso, is increasing its population with extraordinary rapidity, the figures having risen from 34,586 to 56,961 in the space of three years. In 1892 its residents numbered less than 20,000. As is elsewhere explained, the phenomenon is ascribable to the large measure of success that has attended the efforts of the Government to develop the resources of the northern island. Otaru is the natural outlet for the mineral and other produce of that part of Yeso, and must continue to grow in proportion to the progress made with the colonization programme. The Ishikari region is rich in coal, and sulphur is also an export, both industries contributing to the demand for labour at the shipping port. Thus it is that Otaru grows.

CLASSIFICATION OF INHABITANTS.

In Japan there are *kwazoku*, *shizoku* (*samurai*) and *heimin*, and though the distinctions cannot be said to be so sharply drawn at the present day as they were of old, it is still convenient to adhere to

the original method of computation. The *kwazoku* are the nobles of Japan; the *shizoku* in pre-Restoration days exclusively occupied the military and professional ranks, and the *heimin* formed the trading and labouring classes. The *shizoku* are to-day largely engaged in commerce, and the army and navy are extensively recruited from among the *heimin*, but the Japanese statisticians continue to class the inhabitants under the three heads named.

In the subjoined tables the growth of the population during the decade ending with 1898 is thus shown, and the rise of several modern industries is exemplified to a great extent by the increased number of the inhabitants who are seen to be engaged therein according to the figures appended. The foreign population is shown independently, according to nationality, and it will be observed that it has grown substantially since the war with China, partly, by reason of the Chinese element, which in 1895 had been much reduced, having recovered and even surpassed its previous dimensions.

CLASSIFICATION TABLE.

		Kwazoku.		Shizoku.		Heimin.		Total.
1888	...	3,811	...	1,976,480	...	37,626,943	...	39,607,234
1898	...	4,551	...	2,105,696	...	41,650,568	...	43,760,815

COTTON-SPINNING INDUSTRY.

			Males.	Females.
1888	...	Operatives employed—daily average	1,900	6,500
1898	...	“ “ “	16,180	50,620

TEXTILE INDUSTRY.

			Males.	Females.
1894	...	Operatives employed—daily average	48,175	895,416
1898	...	“ “ “	52,860	988,098

MANUFACTURE OF SAFETY MATCHES.

			Males.	Females.
1894	...	Workpeople engaged	7,358	20,646
1897	...	“ “	21,447	26,277
1898	...	“ “	5,442	14,466

The remarkable diminution shown in the figures for 1898 is ascribable to the introduction of improved machinery and propor-

tionate supersession of hand-labour. The value of the output was not reduced.

The productive classes in Japan constitute over 76 per cent. of the whole adult population.

Of this proportion of 76 per cent., three-fourths belong to the agricultural class, one-sixth are artisans or belong to the mercantile class, and one-twelfth are to be classed as miscellaneous.

The professional classes are to be found represented among the remaining 24 per cent. of the adult population to the extent of about one-seventh thereof. Precise figures are unattainable.

FOREIGN RESIDENTS IN JAPAN.

Nationality.	December 31, 1892.	December 31, 1895.	December 31, 1899.	
	Males and Females.	Males and Females.	Males.	Females.
Americans . . .	958	1,022	764	532
British . . .	1,728	1,878	1,262	751
Russians . . .	80	222	91	43
Dutch . . .	91	80	56	29
French . . .	404	391	346	117
Portuguese . . .	157	127	102	56
Germans . . .	480	493	396	136
Swiss . . .	74	75	62	32
Belgians . . .	20	27	21	5
Italians . . .	39	47	42	9
Danish . . .	69	70	44	15
Norwegians and Swedes . . .	24	41	30	12
Spanish . . .	14	39	41	9
Austrians and Hungarians . . .	47	54	56	27
Hawaiians . . .	17	9	—	—
Chinese . . .	5,574	3,642	5,014	1,348
Coreans . . .	5	12	178	10
Others . . .	22	17	27	11
TOTAL . . .	9,803	8,246	8,542	3,142
			11,684	

BIRTH-RATE AND DEATH-RATE IN JAPAN.

BIRTHS.

In 1888 there were 609,250 boys and 581,173 girls born in Japan, the proportion of boys to 100 girls being 104·83.

The births averaged 3 to every 100 inhabitants.

In 1898 there were 696,131 boys born and 673,491 girls, the proportion of boys to every 100 girls being 103·36.

The births in 1898 averaged 3·13 to every 100 inhabitants.

DEATHS.

In 1888 the deaths numbered 752,834, and of those who died 384,514 were masculine and 368,320 feminine. The proportion was 104·4 males to 100 females, and the percentage of deaths 1·9 for the year.

In 1898 459,298 males and 435,204 females were included in the mortuary returns, being in the proportion of 105·54 males to every 100 females. The percentage of deaths for the year was 2·04.

AUGMENTATION.

The excess of births over deaths in 1888 was 1·38 per cent.

In 1898 it equalled 1·23 per cent.

THE RATES OF INCREASE CONTRASTED.

In the United Kingdom of Great Britain and Ireland, the population of which is set down as $41\frac{1}{4}$ millions, the rate of increase is practically 1,000 per diem.

In the Japanese Empire, exclusive of Formosa, with a population of $43\frac{1}{2}$ millions, the augmentation has been at the rate, taking the average of the ten years 1889 to 1898 inclusive, of 415,358 per annum, or 1,138 per day.

This rapidity of increase sufficiently warrants the statesmen of the Far East in attaching the highest importance to problems of emigration and colonization.

SECTION II.

WEALTH.

WITH the restoration of peace after the signing of the Treaty of Shimonoseki in 1895 there came about a stupendous reaction from the condition of temporary stagnation to which all Japan's industrial enterprises had been brought by the war to one of great industrial expansion. Prices of stocks and shares rose tremendously ; many new companies were formed, and old-standing ones enlarged their capital. The total sum subscribed for new undertakings or for the expansion of those already established amounted in the year following (1896) to £33,984,000. When to this was added the amounts that had been previously subscribed for similar objects, it was found that the total capital invested in industrial enterprises had reached the substantial figures of £93,954,000.

It became apparent that it was beyond the economic resources of the nation to meet such a sudden and extensive demand for capital. The rate of interest steadily rose, until in December, 1897, it stood upon daily balance at .03 per cent. The stringency of the money market was generally felt, and unhappily the rice crops in the autumn of 1897 were no more abundant than they had been in 1896, which was an uncommonly bad year. Added to this, the prospect of the new tariff regulations coming into force caused an eagerness on the part of importers to take advantage of the old rates. The influx of imports was abnormally great over exports.

In April and May, 1898, the average discount rate in Tokio on daily balances stood at .032 per cent., and the Consolidated Loan Bonds showed signs of depreciating to below 90 yen.

It was not astonishing that under these circumstances some newly-established companies, or old companies with expanded capital, failed to command the payment of promised subscriptions. Trade in general became greatly depressed on account of the deficient rice crops during successive years. The demands for manufactured

goods decreased. Industrial concerns were face to face with the prospect of commercial panic. The Finance Minister of the day, Count Inouyé, was equal, however, to the emergency. He employed the remaining portion of the Chinese War indemnity at his disposal partly to buy up from the market Government Loan Bonds to the face value of £3,870,000, and partly to subscribe for £374,000 worth of debentures issued by the Industrial Bank of Japan. This bank he authorized, moreover, to make loans to companies having promising prospects. After this the money market became easier. By September, 1899, the discount rate had fallen to an average of .02 per cent., owing to the rich rice harvest of 1898 and the restoration of parity between imports and exports, due to the increased export of silk and copper, etc., in 1899.

Then, in the succeeding month of October, came the outbreak of hostilities in the Transvaal, and a consequent stringency of the money market in Great Britain, its very centre. The Bank of England began to raise its rate of interest, and to absorb gold into its coffers. India, in view of its intended adoption of the gold standard, likewise began to accumulate gold. At once there recommenced the drain of gold from Japan which had proved so embarrassing four years before. The Bank of Japan twice put up its rate of discount in November, and the rumour gained credence that it had ceased to make loans. Alarm spread everywhere, and for several days together the value of stocks and shares sank threateningly. But the truth became known, and a catastrophe was averted, though the Bank of Japan, in order to tide over the crisis, was compelled to make an excess issue of its notes.

Count Matsukata, the Finance Minister of the Marquis Yamagata's Cabinet, adopted measures that were designed to prevent the exportation of gold, and recent returns show that those measures have not been wholly unsuccessful. But the conditions bearing upon the import and export of gold, as involving a close relationship to the maintenance of the requisite gold reserve, must ever demand, and will unquestionably receive, the closest attention of the Japanese Government. It is one of the duties imposed by the adoption of the gold standard.

The tables appended are designed to show the national position as regards exports and imports per head of the population, the national wealth as indicated by the amounts standing to credit at the various banks, and the earnings of public companies, etc.

The National Revenue and the National Debt are given in detail, and an interesting comparison is that presented by the figures for 1892-93 with those for the financial year 1899-1900.

It will be observed that the revenue for 1900-1901 exceeds in only a trifling degree that for the previous financial year. An analysis of the Budget figures for the twelve months ending with March, 1901, however, proves clearly that the falling off in revenue was due to a diminution in the instalment of the Chinese indemnity credited to the accounts for this period. By prearrangement a larger proportion of this indemnity was absorbed in the returns for 1897-98 and 1898-99 than in succeeding years, and this source of revenue for 1900-1901 yielded nearly a million sterling less than was included in the figures for the year before.

On the other hand, the profits of Government enterprises were £3,923,000 greater last year than in the twelve months preceding, and the tax on *saké*, the national beverage, yielded two-thirds of a million sterling more than in 1899-1900. The land tax, moreover, was by a third of a million sterling more productive likewise. These are all sources of revenue which tend constantly to increase rather than to diminish.

The latest returns for 1902, show a revenue of 28 millions sterling, and it is declared that over 128 millions sterling are invested in economic enterprises in Japan at the present day.

TEN YEARS' COMPARATIVE TABLE.

Year.	EXPORTS.		IMPORTS.	
	Total.	Per Head.	Total.	Per Head.
	£	s. d.	£	s. d.
1890 - -	5,668,703	2 10	8,183,657	4 1
1891 - -	7,959,553	3 11½	6,385,113	3 2½
1892 - -	9,117,855	4 6½	7,595,234	3 9½
1893 - -	9,041,990	4 5	8,935,533	4 4½
1894 - -	11,330,899	5 6	12,167,726	5 11
1895 - -	13,618,632	6 6	13,867,484	6 7
1896 - -	11,784,276	5 7	17,167,447	8 2
1897 - -	16,313,507	7 7	21,290,077	10 2½
1898 - -	16,575,375	7 8	27,750,215	12 11
1899 - -	21,492,989	9 2	22,040,192	10 0

BANK DEPOSITS.

Year.	Deposits during Year.	Remaining in Banks at End of Year.	Average Sum per Head of Population remaining in Banks at End of Year.
	£	£	s. d.
1887 - -	120,477,987	8,018,617	4 3
1890 - -	78,912,894	4,416,680	2 2½
1892 - -	100,891,120	5,978,129	2 11½
1894 - -	206,273,119	13,896,575	6 9
1895 - -	283,294,428	19,113,540	9 1
1896 - -	455,190,242	42,718,970	20 4
1897 - -	573,115,800	37,514,467	17 5
1898 - -	606,176,816	37,517,333	17 5
1899 - -	749,942,520	56,413,240	25 8

RAILWAY TRAFFIC RECEIPTS.

COMPARATIVE TABLE FOR LAST TEN YEARS.

	£		£
1890-91	744,860	1895-96	1,878,679
1891-92	856,063	1896-97	2,114,708
1892-93	893,026	1897-98	2,783,195
1893-94	1,159,447	1898-99	3,298,520
1894-95	1,374,256	1899-1900	3,946,138

TRAMWAY TRAFFIC RECEIPTS.

COMPARATIVE TABLE FOR LAST TEN YEARS.

	£		£
1890	28,875	1895	47,519
1891	29,208	1896	66,589
1892	40,343	1897	79,037
1893	27,340	1898	108,058
1894	34,513	1899	145,000

NATIONAL REVENUE.

£			£		
1891-92	...	8,355,589	1896-97	...	18,701,344*
1892-93	...	8,178,631	1897-98	...	22,639,012
1893-94	...	8,904,221	1898-99	...	22,005,412
1894-95	...	9,817,002	1899-1900	...	25,368,235
1895-96	...	11,843,272	1900-1901	...	25,454,981

* Increased by Chinese Indemnity instalment of 4,000,000 sterling.

POST OFFICE REVENUES.

COMPARATIVE TABLE FOR LAST TEN YEARS.

£			£		
1889-90	...	385,923	1894-95	...	838,104
1890-91	...	463,798	1895-96	...	834,104
1891-92	...	504,936	1896-97	...	937,227
1892-93	...	551,891	1897-98	...	1,102,549
1893-94	...	648,768	1898-99	...	1,241,903

THE NATIONAL DEBT.

Since 1892 this has risen from £28,632,631 to its present total (1900) of £50,516,670, the increase having been most marked, of course, in the year which followed the outbreak of war with China.

The component parts of the Public Debt are as given in the sub-joined table, and it will be noticed that practically one-half of the sum-total is comprised in the two items of War and Public Works. The first was incurred almost entirely in 1895, the second was non-existent until 1897-98, and has been incurred in the execution of works of public utility which are already more or less remunerative, and tend to become entirely so as time goes on.

SCHEDULE A.

1892-93.				£
Old Debts of the ancient <i>Hans</i> (<i>Kiu-Kosai</i>)	...	...	...	636,418
New Debts, entitled <i>Shin-Kosai</i>	...	...	...	1,052,592
Debt incurred in the retirement of <i>old</i> paper-money				195,580*
Debt incurred in the extinction of feudal pen-				
sions (<i>Kin-roku</i>), 5 per cent.	...	...	...	3,074,002
Ditto 6 per cent.	...	...	...	832,853*
Naval Loan, 5 per cent.	...	...	...	1,698,000
Converted Debt, 5 per cent.	...	...	...	15,448,300
Supplementary Debt incurred on railway con-				
struction, 5 per cent.	...	...	...	200,000
New Foreign Loan, 7 per cent.	...	...	...	374,881
Loan incurred in suppression of Satsuma Revolt,				
7½ per cent.	...	...	...	1,000,000*
Loan, without interest, for redemption of paper-				
money	...	...	...	2,200,000
Paper-money in circulation	...	...	...	1,920,000
				<hr/>
				£28,632,626

The sum required for the year indicated for the service of the National Debt was £1,945,591.

* Extinguished in 1893-94.

SCHEDULE B.

1899-1900.				£
Debts of the ancient <i>Hans</i> or Daimiates, without				
interest	...	...	...	482,800
<i>Kinroku</i> Debt, for redemption of feudal pensions				
bearing 5 per cent. interest	...	...	...	2,542,865
Naval Loan, 5 per cent.	...	...	...	879,660
Converted Debt, 5 per cent.	...	...	...	16,869,360
Railway Construction Debt, 5 per cent.	...	...	...	3,404,270
Railway Debt of Yezo (Hokkaido), 5 per cent.	...	...	...	341,995
War Debt, 5 per cent.	...	...	...	11,657,645
Works of Communication Debt, 5 per cent.	...	...	...	11,918,130
Paper-money Redemption Loan	...	...	...	2,200,000
Paper-money in circulation	...	...	...	219,945
				<hr/>
				50,516,670

The amount required for the twelve months indicated for the service of the above National Debt was £3,427,895.

JAPANESE CONSOLIDATED LOAN.

The market prices in London of the Japanese Consolidated Loan Bonds averaged :

					£	s.	d.
In 1896	...	...	...	...	108	2	10
In 1897	...	...	...	...	101	15	8
In 1898	...	...	...	...	94	7	7
In 1899	...	...	...	...	96	0	0

It should be noted that the market price was steady at £96 continuously after June, 1898.

JAPANESE BONDS.

The market prices in London of the Japanese Military Loan (shown in Schedule B as War Debt) Bonds (payment guaranteed to be made in English money, at the rate of 2s. 0½d. per 1 yen) averaged £104 14s. 10d. for the year 1898.

In March, 1899, however, the market price had risen to £106 16s. 7d., as compared with £103 2s. 1d. in March of the preceding year.

In November, 1901, the Bonds were quoted at 103½.

SECTION III.

WANTS.

HALF a century ago, or thereabouts, Japan rather reluctantly came to the conclusion that she stood in need of things that the outside world could supply, and it is satisfactory, from the commercial point of view, to know that her wants have been growing ever since.

The standard of living among all classes has risen, and the importation of goods which may be regarded as luxuries, and in the Customs classification rank as such, steadily increases.

But the advance is still more marked in respect of Japan's purchases of materials and machinery designed to aid in the development of her industries, and to secure for her a place among the great manufacturing nations of the world. Many of the items in the lists of imported articles which will be found in this section fall under this description, and they are among the most costly of the national purchases. An analysis of the returns, showing the shares taken by different countries, is hereunto appended.

NOTE.—Since January, 1894, the value of the yen has seldom exceeded 2s. 1d., and has at times been below 2s.

As a convenient average, therefore, the value has been taken as $\frac{1}{10}$ of a £ in all calculations of a date subsequent to 1893.

PRINCIPAL COMMODITIES IMPORTED ARE MAINLY
DERIVED FROM :

Goods.	Country.	Proportion Percent.	Other Contri- butors.	Percent.
Alcohol -	Great Britain	81	U.S. America	14
Alizarine dyes -	Germany	96	—	—
Aniline dyes -	Germany	93	Switzerland	6
Beans, peas and pulse -	China	88	Korea	—
Blankets -	Great Britain	90	Germany	9
Candles -	Belgium	40	France	27
Canvases -	Great Britain	93	Germany	14
Carriages, railway	Great Britain	95	U.S. America	6
Caustic soda -	Great Britain	100	—	—
Chintzes—i.e., printed cottons }	Great Britain	92	Russia	3
			Germany	3
Chlorate potash -	Great Britain	60	France	19
Cigars -	Philippine Islands	77	Germany	18
Cigarettes -	America	78	Germany	11
Coal -	Great Britain	92	Great Britain	20
Condensed milk -	America	50	China	3½
			Switzerland	30
Cotton, raw -	U.S. America	48	Great Britain	14
			British India	28
			China	18
„ yarn -	Great Britain	98	—	—
„ satins -	Great Britain	99	—	—
„ drills -	Great Britain	96	—	—
„ threads -	Great Britain	94	—	—
„ velvets -	Great Britain	99	—	—
„ kerchiefs -	Great Britain	87	Switzerland	4
			Germany	8
Cotton on the seeds	French Indo-China	46	China	32
			British India	16
Dynamo - electric plant -	U.S. America	60	Germany	16
			Great Britain	18
Flannels -	Germany	93	Great Britain	6
Flax, hemp, and jute -	China	70	Philippines	14
			British India	16
Flax, hemp, and yarn -	Great Britain	95	British India	3
			China	2

PRINCIPAL COMMODITIES IMPORTED—*continued.*

Goods.	Country.	Proportion Per cent.	Other Contributors.	Per cent.
Flour - - -	United States	99	—	—
Hides - - -	China	48	Korea 32 British India 8 Hong Kong 7	
Indigo, dry -	British India	97	—	—
Iron, bar and rod -	Belgium	60	Great Britain	30
„ nails - -	U.S. America	70	Germany	27
„ plate and sheet -	Great Britain	72	Belgium	22
„ pig - - -	Great Britain	70	China 16 U.S. America 7	
„ pipes and tubes }	Great Britain	60	U.S. America 26 Belgium 12	
„ ware - - -	Germany	90	—	—
Italian cloth -	Great Britain	92	Germany	7
Kerosene - -	United States	80	Russian Asia 14 Dutch India 6	
Lacquer - - -	China	95	—	—
Lead - - - -	Australia	62	U.S. America	30
Leather, sole and sundry }	U.S. America	43	British India 41 Great Britain 10	
Liquid gold -	Great Britain	95	—	—
Locomotives -	Great Britain	52	U.S. America 43 Switzerland 3	
Logwood extract	France	85	Germany	12
Machinery :				
Spinning -	Great Britain	94	Germany	5
Weaving -	Great Britain	90	—	—
Boilers, engines, etc. }	Great Britain	48	Germany 30 U.S. America 8	
Mercury - - -	British India	92	—	—
Mousseline de Laine }	France	67	Switzerland 24 Germany 9	
Oil-cake - - -	China	90	Korea	10
Paint, in oil -	Great Britain	92	Germany	4
Paper, for printing - }	America	40	Germany 30 Great Britain 20	
Paraffin wax -	U.S. America	85	Great Britain	14
Phosphorus - -	Great Britain	82	France	17
Rails - - - -	U.S. America	55	Great Britain	40
Rice - - - - -	French Indo-China	60	Korea, China and Siam	—

WANTS

PRINCIPAL COMMODITIES IMPORTED—*continued.*

Goods.	Country.	Proportion Per cent.	Other Contri- butors.	Per cent.
Salicylic Acid -	Germany	99	—	—
Shirtings -	Great Britain	99	—	—
Steamships -	Great Britain	87	—	—
Steel - - -	Great Britain	82	{ Germany 8 Belgium 4 Sweden 4	
Sugar, white -	Hong Kong	63	{ Germany 25	
„ brown -	Philippine Islands	40	{ China 30 Hong Kong 12	
Teacloths -	Great Britain	100	—	—
Telegraph wire (steel) -	Great Britain	95	—	—
Turkey reds -	Great Britain	92	Switzerland 8	
Watches -	Switzerland	75	{ U.S. America 14 France 5	
Window-glass -	Belgium	75	{ Great Britain 24	
Wine - - -	France	78	{ America 10 Spain 9 Australia 22	
Wool - - -	Germany	24	{ China 18 Great Britain 12	
Woollen cloths -	Great Britain	64	{ Germany 30	
„ yarn -	Germany	70	{ Great Britain 29	
Zinc, sheet -	Germany	72	{ Great Britain 22 Belgium 6	

BEANS AND PEAS.

The import of pulse is variable in quantity, but it ordinarily consists, for the most part, of the soja bean, used in the manufacture of the soy or ketchup (in Japanese *shoyu*) that is so largely consumed by the people as the universal sauce. The brewing of shoyu is extensively carried on in the vicinity of Osaka and Kobé, but it is by no means confined to that region, though Kōbē is the port at which the bulk of the bean supply is received from China, averaging four-fifths, and the remainder from Korea. The total production of shoyu amounts to a million and a half koku—in other words, about 60 million gallons. To brew this large quantity there are throughout Japan some 10,000 establishments in all, and the beans imported

in 1900 were valued at £491,813. The year before it amounted to £882,211. .

Other and coarser varieties of the bean, pea, and vetch, grown in Manchuria, have the oil expressed for cooking and lighting purposes, and the refuse is conveyed to Japan in the form of large round cakes like grindstones. It then bears the name of 'oil-cake,' and as such the import figures in these calculations farther on. Oil-cake is required mainly for manuring the wet rice-fields, but it is reported that an increasingly large fraction of it is being used as food for cattle.

BLANKETS.

The Japanese Government is an extensive purchaser of red and green blankets, but obtains all that it requires from the recently established Japanese factories. The import of these articles has dwindled to a very small amount. Thirty years ago it was considerable, for blankets were then largely needed for the army, and none could be made in the country.

COAL.

To carry coals to Japan must at first sight appear to be an operation as profitless as the proverbial conveyance of coals to Newcastle, since it is well known that the collieries of the extreme east have a very considerable output, and that Japanese coal is largely exported to neighbouring countries. But the produce of the Japanese coal-mines, though excellent of its kind, is not *steam* coal. It is used in steamers, no doubt, and competent marine engineers have spoken well of it, but vessels using it emit dense smoke from their funnels, and smokeless Welsh coal continues to be sought for, whilst for naval purposes it is altogether necessary.

Japan imported coal to the value, in

	£			£		
1893	of	8,170	|	1897	of	57,857
1894	„	47,275	|	1898	„	39,918
1895	„	85,308	|	1899	„	95,661
1896	„	51,938	|	1900	„	214,380

In the period 1894-95, when the import assumed large proportions, Japan was at war. The inference is obvious. But the demand in 1900 was more general, and the competition among

foreign navies to obtain the Welsh coal that merchants in Japanese ports then had in stock was spirited, and doubtless profitable to the holders. Complications in China and other political causes have hitherto necessitated the keeping of ample supplies of smokeless coal in the ports of the Far East, and it is likely to figure in the catalogue of imports to Japan for all time. The United States exported to Japan in 1900 some £27,000 worth of 'Pocahontas' coal. How far the experiment was successful is not positively known, but the field is not likely to be left entirely to South Wales.

RAW COTTON.

The import of this article necessarily increases year by year as the spinning industry of Japan continues to grow, and the import of spinning machinery, alluded to in its place elsewhere, affords an excellent criterion of the robust health which that industry enjoys. Its phenomenal progress since the close of the war with China in 1895 has been remarked throughout the manufacturing world.

British India was from 1895 to 1900 the main source of supply, but the United States then took first place. China ceased to occupy the premier position in this respect in 1895. But America always ranked high, and occupied the second place in 1898, China then holding the third.

In 1895 the experiment was made of importing raw cotton from Siam. In 1898 Egypt was laid under contribution, and, to a very small extent, Australia. French India began to supply Japan in 1894, and though the import has varied, it has always been considerable since that time.

The actual figures are given in the accompanying table, and raw cotton is the article of import which is represented in Japan by much the highest values.

The object which the Japanese have in view in importing Egyptian cotton, is to spin the finer counts which the quality of the China import does not admit of their doing successfully. The quantity thus annually brought from Egypt is on the increase, so the venture cannot have been altogether a failure.

In 1900 a simultaneous deficiency in the crops of American, Indian, and Egyptian cotton combined to force up prices, and the pressure upon Japanese dealers was greatly enhanced by the troubles

which supervened in North China. It was only when the withdrawal of the international forces from Peking permitted ordinary business relations with the Chinese to be in part resumed that trade in any sense revived. The fact that transactions in this staple were confined to the first and last quarters of 1900 accounts for the sum total for the year showing practically the same figures as those for 1899. When 1901 results come to be considered, it is certain that a very appreciable advance over 1900 will mark the commercial activity of the year in respect of this item.

About nine-tenths of the Indian cotton sent to Japan is shipped from Bombay, and nearly nine-tenths of the Chinese cotton from Shanghai. Of the American cotton, New York sends more than one-third, and the two Californian ports San Francisco and San Diego together send more than one-fourth.

The port of Kobe receives seven-eighths of the entire import for the Japanese Empire, and transmits it to Osaka, twenty-seven miles distant, for use in the mills of that city.

IMPORTS OF RAW COTTON.

Values in pounds Sterling.								
	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Australia	—	£	£	£	£	£ 853	£ *	£ *
British India	605,204	781,658	769,322	1,924,484	2,572,018	2,478,440	3,016,599	1,685,000
China	780,599	812,041	1,378,610	815,808	952,781	490,906	435,014	1,815,000
Egypt	—	—	—	—	—	34,649	*	47,500
French India	—	23,802	40,681	24,214	33,134	58,877	41,961	56,000
Siam	—	—	918	1,727	—	855	*	*
United States	127,842	268,067	233,817	425,239	727,322	1,476,119	1,647,680	2,970,000
Other countries	16,342	25,321	7,130	19,153	26,968	2,341	95,309	68,500
	1,529,487	1,910,389	2,430,478	3,210,625	4,312,223	4,541,040	6,136,572	6,140,000

* Included in 'Other Countries.'

The *quantity* obtained in 1898 from British India was perceptibly greater than in 1897, but the *value* was a trifle less.

COTTON YARNS.

Among the varied manufactures with which the United Kingdom undertakes to meet the demand from Japan, cotton yarns occupy a place in the front rank. Practically British yarns have still a monopoly of the trade, for although India claims a share, it

is not a large proportion of the total import, and its tendency is constantly to decline. But it is otherwise with the products of the spinning-mills of Japan itself. The owners of these avowedly aim at nothing short of the complete substitution of home-spun yarns in the Japanese markets for those that have hitherto been procured from abroad, and the progress made already in this direction is not to be ignored. It seems inevitable that Lancashire spinners will find the task of competing with the mills of Osaka more and more formidable, and one to tax their energies and resources to the utmost. If that supremacy in the Oriental trade which has been theirs so long is to be preserved, the vigilance and enterprise for which the North of England is famed must not for one moment be relaxed.

The values of the imports of cotton yarns since 1893 are recorded by the Department of Commerce as follows (converted into pounds sterling):

Year.	British India.	France.	Germany.	Great Britain.	Other Countries.
	£	£	£	£	£
1893 -	124,316	296	497	603,300	13
1894 -	68,755	—	112	728,868	—
1895 -	39,263	—	206	668,806	21
1896 -	27,844	—	1½	1,109,348	5
1897 -	3,681	52	—	958,791	—
1898 -	3,463	350	921	850,022	—
1899 -	2,131	170	460	493,566	—
1900 -	1,141	340	670	716,655	—

Lancashire's sales of yarn to Japan steadily diminished from 1896 to 1899, but revived in part in 1900. India's sales of the article have fallen rapidly since 1893, and have almost reached the vanishing point.

COTTON SATINS AND VELVET.

The import of this class of goods rose from £137,396 in 1899 to £462,145 in the ensuing year. But the increase was mainly to be ascribed to the extremely low stocks held at the end of 1899, and the necessity for prompt replenishment. A considerable percentage of the goods accounted for in the Customs returns as imports, more-

over, were at the end of the season lying accumulated at the open ports, lacking purchasers, having been brought out purely on speculation. Some, though sold on contract, had not been taken delivery of. In 1898

				£
Cotton velvets, value	...	...	...	81,328
Cotton satins, value	...	...	...	164,522
Total				245,850

were imported, 99 per cent. of which were of British manufacture. Germany was the only competitor, and she did better in 1894 in these goods than she has done since. Practically Great Britain has the field to herself.

SHIRTINGS AND COTTON PRINTS.

Until a very recent period the imports of these goods were almost exclusively from Great Britain.

	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
	£	£	£	£	£	£	£	£
GRAY SHIRTINGS:								
Great Britain	231,466	203,174	306,516	404,989	377,831	436,530	427,094	743,330
Other countries	46	338	633	836	549	1,699	1,820	2,799
WHITE SHIRTINGS:								
Great Britain	16,779	33,743	50,261	65,544	24,765	70,278	73,631	138,210
Other countries	50	17	307	—	319	667	416	631
COTTON PRINTS:								
Great Britain	59,228	50,015	38,210	118,269	98,112	110,270	102,171	96,347
Germany	635	1,419	—	426	—	2,896	440	1,362
Russia	212	70	125	246	402	2,970	1,583	1,469
Switzerland	3,462	583	—	373	—	1,166	1,426	1,294
Other countries	51	80	—	—	128	373	328	1,585

But since 1897 an appreciable import has taken place into Japan of these goods from other European countries, and the competition may become in time a noteworthy feature of the trade. At present it is not formidable.

FLOUR.

In proportion to the growth of the population Japan year by year demands an increasing supply of food-stuffs, and as the yield of agricultural produce remains practically the same—there being but little addition made annually to the cultivated area devoted to cereals—it follows that foreign flour and other farines are becoming more and more required, and are already in their way indispensable

to the life of the nation. Flour is not used for bread as the staple food of the people, but it is employed in a variety of ways to supplement the boiled rice which forms the really substantial element of a Japanese meal, and is, moreover, part of the rations issued to the troops. The enormous increase which has taken place since 1893 in the import is shown by the subjoined figures :

					£
1893	...	...	...	...	31,965
1894	...	...	...	...	61,900
1895	...	...	...	...	40,685
1896	...	...	...	...	99,420
1897	...	...	...	...	115,656
1898	...	...	...	...	202,241
1899	...	...	...	...	137,085
1900	...	...	...	...	398,274

HORSES AND CATTLE.

Horses and cattle are being largely imported into Japan, and constant efforts are being made to improve the quality of the live-stock on Japanese farms. At first horses were procured from Australia, but of late years there have been large purchases in Europe and America of horses and mares, cows and oxen, sows and boars.

The table appended supplies information on these points :

	Horses. No.	Proportion to 1,000 Inhabitants.	Cattle. No.	Proportion to 1,000 Inhabitants.
Nippon, Central -	417,270	24·6	126,955	7·5
" North -	479,783	73·9	63,279	9·75
" West -	61,677	6·2	541,526	55·0
Shikoku -	66,535	22·7	110,901	37·9
Kiushiu -	477,056	70·2	380,731	56·0
Yeso -	60,090	78·3	6,363	8·3
Taiwan (Formosa)	194	0·7	203,117	76·2

It will be observed that Formosa is rich in cattle, but the figures given include the buffaloes common to the region. Yeso as yet boasts but few oxen, but horses are there found in greatest abundance, and they flourish throughout Northern Nippon. The island of Kiushiu, moreover, is well supplied with both.

INDIGO.

The dry indigo needed by Japan is nearly all supplied by British India. A small fraction of the import is credited to Dutch India and the Philippine Islands. But from 1893, when the total value of the indigo import from Manilla stood as high as £8,000, it fell to £3,730 in 1894, to £40 in 1895, and £24 in 1896. Within the last year or two the trade with the Philippines in this article of commerce has revived, and their greater proximity to Japan should render these American colonies increasingly formidable rivals to British India in the supply of the most essential of all dyes for the Japanese market, dark-blue being the prevailing tint for the cotton garments worn by the working-classes throughout the Ten-shi's dominions.

During the eight years 1893-1900 there was a steady increase in the import :

					£
1893	...	..	...	*..	44,420
1894	...	...	...	...	32,986
1895	...	...	...	...	58,137
1896	...	...	...	...	106,735
1897	...	...	...	...	153,802
1898	...	...	...	...	227,081
1899	...	...	...	...	290,382
1900	...	...	...	...	398,386

IRON, PLATE AND SHEET.

Year.	Belgium.	France.	Germany.	Great Britain.	Other Countries.
	£	£	£	£	£
1893 -	6,611	143	1,823	24,430	1
1894 -	12,019	42	3,723	56,887	—
1895 -	17,908	240	2,785	70,911	—
1896 -	16,901	598	2,870	113,317	—
1897 -	13,667	—	4,595	91,127	134
1898 -	18,043	—	6,318	108,038	8,184*
1899 -	51,501	—	9,771	154,524	6,244*

* Includes United States.

In 1900 the total import of 'plates, sheet, corrugated and galvanized iron' inclusive attained the high value of £637,557.

PIG-IRON.

Year.	Germany.	Great Britain.	United States.	China.	Other Countries.
	£	£	£	£	£
1893 -	7,264	37,161	—	—	220
1894 -	2,698	65,860	—	—	5,795
1895 -	2,834	64,545	—	—	—
1896 -	6,816	63,319	—	—	818
1897 -	7,707	79,750	5,885	—	57
1898 -	7,332	104,872	22,691	1,931	1,314
1899 -	4,376	68,495	6,252	14,646	2,783

In 1900 the total import was valued at £98,297, being practically equal to that of 1899.

BAR AND ROD IRON.

Year.	Belgium.	France.	Germany.	Great Britain.	Sweden and Norway.	United States.	Other Countries.
	£	£	£	£	£	£	£
1893 -	22,805	2,113	11,307	61,146	184	—	20
1894 -	41,000	1,478	34,068	57,170	149	—	35
1895 -	93,716	2,122	25,482	86,536	524	—	186
1896 -	123,179	3,061	27,761	80,024	1,406	—	536
1897 -	106,855	—	29,172	152,911	2,219	13,432	21
1898 -	165,450	4,073	45,861	182,569	2,061	5,368	794
1899 -	156,471	—	19,605	78,131	1,606	2,233	2,319
1900 -	255,086	—	77,381	189,311	?	5,592	?

In 1900 the total import rose to £535,264, just double that of 1899.

IRON NAILS.

Year.	Belgium.	France.	Germany.	Great Britain.	United States.	Other Countries.
	£	£	£	£	£	£
1893 -	16,261	—	54,536	17,949	20	10
1894 -	15,039	562	101,731	15,866	56	6
1895 -	9,402	351	106,584	10,796	506	163
1896 -	11,416	991	93,896	14,487	23,231	1
1897 -	5,829	592	42,201	3,265	93,937	2
1898 -	1,321	88	13,086	2,752	97,781	3
1899 -	687	—	65,731	6,052	149,756	115

In 1900 the total import was £222,650, of which two-thirds came from the United States.

RAILS.

Year.	Belgium.	Germany.	Great Britain.	United States.	Other Countries.
	£	£	£	£	£
1893 - -	2,978	457	63,274	—	—
1894 - -	3,684	2,190	115,042	—	3
1895 - -	3,943	1,964	86,644	—	—
1896 - -	8,726	10,030	202,854	37,491	441
1897 - -	29,299	17,030	162,672	123,497	—
1898 - -	7,548	13,498	80,180	160,973	971
1899 - -	2,414	291	17,171	22,951	675
1900 - -	12,655	57,394	92,463	322,726	—

In 1900, as will be seen, the total was £485,238. The bulk of this large import, however, was from the United States, whereas in 1896 and 1897 most of the trade was done by Great Britain.

IRON PIPES AND TUBES.

Year.	Belgium.	France.	Germany.	Great Britain.	United States.	Other Countries.
	£	£	£	£	£	£
1893 - -	—	4	104	10,139	2,041	—
1894 - -	1,007	35	278	45,158	1,928	—
1895 - -	4,227	2,513	362	46,443	6,728	—
1896 - -	24,368	994	684	55,692	7,394	—
1897 - -	11,753	193	—	67,960	9,549	—
1898 - -	33,581	—	2,301	73,452	23,883	74
1899 - -	13,279	—	—	55,742	26,047	274

In 1900 the *total* import rose to £304,381.

KEROSENE OIL.

In twelve years the imports of this product have risen enormously, the value in 1888 having been £351,925, as compared with £1,445,770 in 1900. The demand has increased not only for lighting and heating purposes, but for preserving the cultivated areas from the ravages of insects, kerosene thus taking the place of camphor, which had been extensively used in this way from ancient times.

The United States is by far the largest contributor to the supply,

but Russian oil has of late years—since 1895, in fact—been imported in bulk from Batoum. A certain quantity reaches Japan from Netherlands India.

Kerosene was subject to a duty on entry into Japan amounting to two-fifths of a penny per gallon in tins, and one farthing per gallon in bulk, up to 1901. But in that year the Government determined to double this duty, mainly with the view of encouraging the home industry, which is conducted partly in the province of Echigo, near the port of Niigata, and partly in the island of Yezo.

It has been pointed out that a correct estimate of the movements of the kerosene market in Japan is only to be gathered from the records of actual deliveries from stock to purchasers. The 'cases'—each case containing two tins or cans—delivered to buyers, at Kobe, in 1899 and 1900, were as under, and these figures afford an index not merely to the actual consumption, but to the relative degree of popularity enjoyed by the three classes of oil in domestic use. The cans hold five gallons each.

Year.	Quantity.			
	American.	Russian.	Other.	Total.
	Cases.	Cases.	Cases.	Cases.
1899 - - -	1,996,659	343,136	40,634	2,380,429
1900 - - -	2,106,443	292,174	156,270	2,554,887

It will be observed that, whilst the delivery to consumers of Russian oil fell off considerably, that of other kinds, apart from the American product, was nearly quadrupled.

The favourite American brand appears to be the 'Atlantic.'

The annual values of imported kerosene for the whole of Japan since 1888 are shown below :

Year.	£	Year.	£
1888 - - -	351,925	1895 - - -	430,392
1889 - - -	458,713	1896 - - -	633,103
1890 - - -	495,025	1897 - - -	766,735
1891 - - -	453,572	1898 - - -	755,288
1892 - - -	332,839	1899 - - -	791,814
1893 - - -	440,104	1900 - - -	1,445,770
1894 - - -	513,533		

LEAD.

Year.	Australia.	British India.	Germany.	Great Britain.	United States.	Other Countries.
	£	£	£	£	£	£
1893 -	4,739	—	1,526	5,840	—	127
1894 -	6,838	—	1,180	9,573	—	170
1895 -	8,969	284	4,850	16,981	—	276
1896 -	3,838	864	1,378	15,156	—	—
1897 -	16,105	2,256	40	6,487	890	—
1898 -	21,909	1,078	—	1,844	11,641	46

In 1899 the total import rose to £42,074, or 3,068 tons.

In 1900 " " " 94,646, or 5,979 "

Australia and the United States divided this total for 1900 in the proportion of 62 per cent. and 30 per cent. respectively.

LEATHER.

It is instructive to note the gradual growth of leather in popular estimation, due, no doubt, to its introduction in the first place as material employed in military equipment and saddlery, and, secondly, to the demand for boots and shoes of foreign pattern. When the people wore sandals, and saddles were constructed of wood and lacquer, there was little use for leather, and prior to the Restoration the tanning trade was entirely in the hands of the *Yetas*, outcasts whose position was the equivalent of that of the 'sweepers' of India. There are no *Yetas* now, but there are tanners, who earn fair wages, and the trade of boot and shoe making is industriously carried on, as also that of saddlery and harness-making, in several of the principal cities. Eighty per cent. of the hides used are imported from China and Korea, but manufactured leather reaches Japan principally from the United States and British India. Only a tenth part is contributed by Great Britain. The import rose in 1900 to a value of £212,944, from a total of £65,263 no farther back than 1893.

TOTAL MACHINERY AND ENGINES IMPORTED.

Year.	Great Britain.	United States.	Germany.	France.	Belgium.	Other Countries.
	£	£	£	£	£	£
1893 -	267,094	24,844	6,714	2,316	—	78
1894 -	407,438	77,325	11,617	5,828	—	1,287
1895 -	357,031	48,411	31,161	7,383	218	2,284
1896 -	423,771	75,349	114,244	5,572	321	204
1897 -	891,431	321,964	282,159	6,099	4,301	6,947
1898 -	622,576	124,388	174,284	28,499	8,197	762
1899 -	299,514	115,588	108,285	24,146	10,202	18,044
1900 -	418,007	270,001	156,578	13,688	16,677	29,386

LOCOMOTIVE ENGINES.

Year.	Germany.	Great Britain.	United States.	Other Countries.
	£	£	£	£
1893 -	3,086	19,686	11,670	1,209
1894 -	3,744	98,962	55,320	—
1895 -	11,749	76,186	28,432	—
1896 -	15,093	105,372	41,610	—
1897 -	214	108,548	239,338	3,460
1898 -	13,969	204,096	199,909	8,609
1899 -	5,751	97,395	88,359	5,350

In 1900 the total value of imported locomotives and railway carriages was £247,620.

STEAM BOILERS AND ENGINES.

Year.	Germany.	Great Britain.	United States.	Other Countries.
	£	£	£	£
1893 -	472	14,445	30	1,319
1894 -	1,418	14,902	5,113	80
1895 -	943	28,274	10,366	3,637
1896 -	71,266	2,214	5,439	2,902
1897 -	103,670	3,796	21,197	2,128
1898 -	20,281	34,099	4,712	10,622
1899 -	33,396	17,360	2,289	8,463
1900 -	78,936	49,237	3,812	3,130

SPINNING MACHINERY.

Year.	France.	Germany.	Great Britain.	Other Countries.
	£	£	£	£
1893 - - -	255	1,747	189,012	185
1894 - - -	5,759	1,489	278,582	—
1895 - - -	1,544	5,302	182,592	180
1896 - - -	2,447	12,495	283,745	545
1897 - - -	3,901	5,632	528,616	2,019
1898 - - -	8,181	18,711	281,869	1,030
1899 - - -	785	8,354	68,027	156

OIL-CAKE.

The bean refuse known as oil-cake, left after the oil has been extracted from the beans grown in Manchuria, is an article of commerce between China and Japan the importance of which should not be overlooked. In 1899 Japan took 166,400 tons of it, value £693,331, and in 1900, despite the unsettled condition of the region from which it is derived, the import amounted to 134,679 tons, having a calculated value of £581,512.

A fourth of this quantity was obtained, however, not from Manchuria direct, but by way of Vladivostock, and it appears in the list as an import from Russian Asia. In 1899 only an eighth of the total import took that route.

Oil-cake is said to be unequalled as a fertilizer, and as such is used by the Japanese farmer with great effect. The amount annually purchased has increased tenfold since 1893.

PRINTING PAPER.

Elsewhere it has been shown what the printers and compositors of Japan receive per diem for their labour. The rate will not tempt emigrants from the West. It now remains to illustrate, by the amount of paper annually consumed, how very industrious the Japanese printer can be upon scanty pay. The bulk of the importation is devoted to the production of newspapers, the sale of which, considering that journalism is in Japan one of the most recently established of Western institutions, is phenomenal.

In 1893	the total value was	£ 21,769
„ 1895	„ „	30,769
„ 1896	„ „	72,343
„ 1897	„ „	85,695
„ 1898	„ „	228,321
„ 1899	„ „	74,841
„ 1900	„ „	207,928

The remarkable figures to which the import attained in 1898 represented unquestionably an appreciable amount of unsold stock which was carried forward into 1899, and the average annual consumption appears now to be about £175,000 worth. Compared with 1893, this aggregate affords satisfactory evidence of advancement, and proves that cheap literature is appreciated by the masses, for the journals and pamphlets, translations of foreign books, and other printed matter now circulating in the Japanese Empire—and every town of any importance has its newspaper—are without exception produced on strictly economical lines, and sold to the public at prices which can only leave the barest margin for profit. *Editions de luxe* would certainly be classed as superfluities by a people whose frugality must be reckoned among their most praiseworthy characteristics.

Other kinds of paper are largely bought by Japan, and the sum total of the import in 1900 of paper of various descriptions was over £350,000, practically double that of the previous year. The precise figures were :

Year.	Germany.	Great Britain.	Austro-Hungary.
	£	£	£
1899 - - -	72,131	47,252	23,743
1900 - - -	152,717	103,398	94,556

RICE.

The extraordinary increase in 1898 in the import of this staple was occasioned by a marked diminution in the national crops for 1897. The abundance of the crop in 1898, on the other hand, caused the import to as suddenly fall back to normal dimensions.

But there is annually a despatch of a small percentage of the rice crop of Japan to foreign countries, where Japanese rice is saleable at a comparatively high price. The increasing volume of this export is bound to occasion a corresponding demand for the importation of a cheaper article for home consumption. In other words, as the Japanese are ready to sell some of their highest quality rice at the good figure obtainable for it abroad, they must procure grain, which they are able to do at a lower rate, from British India and French Indo-China, to make up the deficiency so caused. But of late years, apart from this consideration, the Japanese crops would never have sufficed, under even the most favourable circumstances, to feed the rapidly-growing population. Thus, to obtain a supplementary stock from across the seas has not been a matter of choice, but a stern duty laid upon the Department of Commerce and Agriculture. How well it has been fulfilled is best to be seen in the absence of abnormal prices, or of anything approaching a food panic, for many years past. We have it on excellent authority that in former days the price was apt to fluctuate to the extent that 'rice-gambling' was a pursuit often fraught with the most disastrous consequences, but so eagerly followed that special relays of running messengers in the pay of the speculators traversed the country, at the height of the season, almost day and night. The importance of the import trade nowadays lies in its being a regulating factor of the price of the commodity in the home market. Formerly a sudden rise or fall in value occurred simultaneously with every change in the season's prospects, propitious or the reverse, to the great detriment, when it involved dearer food, of the labouring classes throughout the Empire. The introduction of steam transport for the rice that is procurable in Siam, Saigon, China, and Korea has proved an immense boon to the poor of Japan, who no longer go in fear of a rice famine, whatever may be the other necessities of life that they perhaps often lack.

In 1900 the price of a *koku* (i.e., 4.9629 bushels) of rice was as high in February as 26s. 2d., or, roughly, 5s. 3d. per bushel. In June it touched its lowest figure at 22s. 10d., or about 4s. 7d. per bushel.

In 1890, a decade earlier, the average price for the year was 18s. 2d.—i.e., 3s. 8d. per bushel—so that the cost of living in Japan has of late very perceptibly risen, as is shown elsewhere in this handbook.

From the subjoined table it will be plain that Japan is accustomed in bad years to draw heavily upon neighbouring countries for her food-supplies.

RICE IMPORTED

From	1896.	1897.	1898.	1899.
	£	£	£	£
China - - -	135,641	479,426	398,942	23,162
British India - -	5,183	80,675	1,164,241	17,450
Korea - - -	285,203	600,905	270,488	168,990
French Indo-				
China - - -	125,997	875,754	2,576,272	335,409
Siam - - -	14,208	116,076	411,406	51,000
Other countries	—	4	629	2
Total - -	566,232	2,152,840	4,821,978	596,103

STEAMSHIPS.

In 1898 the entire import was derived from Great Britain at a cost to Japan of £748,819. In 1899 it had fallen in value to half that sum, and in 1900 still lower—to £270,919. Great Britain may not claim an absolute monopoly of the supply of steam vessels to Japan, but she continues to furnish the major portion of the ships that Japan buys. As the ship-yards of Nagasaki, Kobé, and Osaka by degrees develop their capacities for output, it may be expected that the demand for foreign-built craft will be reduced still farther, but at present there remains a disposition to purchase abroad, and the Clyde appears to be the favoured region, for reasons which are sufficiently cogent. Trade follows the price-list. Were it feasible to procure the precise type of vessel required for the service of a Japanese shipping company or shipowner at an equally low price in other than British yards, no special preference would be shown for the excellent steamers that the shipbuilders of the United Kingdom are accustomed to construct. It is purely a matter of selection, unbiassed by any leaning towards a particular country or people. The Clyde shipbuilders are fully aware of this fact, and do not need to be reminded, in the face of competition which promises to be exceptionally keen, that no opportunity must be neglected of upholding and consolidating the substantial advantages of an acknow-

ledged superiority. We cannot afford to rest upon our oars, content with the lead that we have obtained in the race for commercial supremacy. If ever we should be tempted to do so, the reflection that there is a very vigorous competitor doing all that science and energy can do to overhaul us should suffice to stimulate us to even greater efforts than we have hitherto made to keep in front. That competitor, as far as the commerce of Japan is concerned, at all events, is the United States of America. In warships—at least, in the department of cruisers—the naval constructors of Philadelphia and San Francisco have already executed several contracts with satisfaction to themselves and the Japanese navy. The next step to be looked for in America, perhaps, is in the direction of an output of merchant steamers which shall, in their suitability to Japanese requirement and conformity to specification, rival the finest achievements of Glasgow, Newcastle, or Sunderland.

Since 1893 the purchases of steamships to be employed in trade have amounted to :

1893	...	...	£ 86,542	1897	...	...	£ 823,264
1894	...	...	820,254	1898	...	...	748,819
1895	..	...	470,055	1899	...	...	362,098
1896	...	...	172,449	1900	...	...	270,919

The year 1894 was that in which Japan went to war with China, and the import of steam vessels rose to nearly tenfold that of 1893. But, as the table shows, the import in 1897 was equal in value to that of 1894, and there was but little diminution in 1898. On the termination of the war, in 1895, Japan was in possession of a number of vessels that had been employed as transports, and these formed the nucleus of the valuable mercantile marine owned by the Japanese at the present day, details of which will be found elsewhere. Once the advantages to be derived from the establishment of steamship lines capable of carrying the national flag into foreign waters, and of inaugurating maritime commerce with Western countries, became generally recognised, there was no lack of native energy to prosecute such undertakings; and thus it was brought about that in 1897, which was a time of peace, the demand for ships was as great as in 1894, which was a time of war. So rapid a development, based as it is upon the solid foundation of profitable commerce as well as political influence—both of which considerations

assuredly were powerful factors in determining the promotion of national maritime enterprise—is a legitimate source of pride and satisfaction to the Japanese people at large.

STEEL.

Year.	Belgium.	France.	Germany.	Great Britain.	Sweden and Norway.	United States.	Other Countries.
	£	£	£	£	£	£	£
1893 - -	237	2,874	2,701	23,265	501	20	—
1894 - -	692	705	4,203	28,924	1,692	—	16
1895 - -	473	856	8,845	38,778	1,172	217	12
1896 - -	1,213	1,801	11,688	63,398	2,147	13	179
1897 - -	2,715	8	8,325	34,022	2,085	82	476
1898 - -	3,501	1,438	7,426	79,312	3,300	1,262	192

In 1899 the total import of steel was of the value of £97,459.

„ 1900 „ „ „ „ „ „ £117,785.

SUGAR.

The demand for foreign sugar, both white and brown, is perpetual and widespread, and, as one of those imports which the Japanese Customs places under the heading of 'Luxuries,' its universal consumption is to be accepted as a sign of the prosperity of the country. Of late years the demand for luxuries has grown perceptibly, and many goods figure in the list of importations which were unknown in Japan in the early years of the Meiji era. That Japan is annually becoming a larger purchaser of sugar the returns for 1900 plainly show, though the totals fell below those of 1898. The import of 1898, however, was phenomenally large, and stocks were carried over, which caused the import of 1899 to be exceedingly low by comparison. In 1900 there was a return to normal conditions, and calculations based thereon are less likely, at all events, to prove fallacious where the export trade of our colonies is in question. It is, of course, mainly from Hong Kong that Japan draws its supplies of refined sugar, though Germany is a strong competitor; and recently another extensive producer has entered the lists—viz., Australia, which began by sending £60,000 worth in 1899, and followed it up by an export to Japan in 1900 valued at £316,856. But the sugar refineries at Tokio and Osaka are doing a substantial business, and in 1900 no less than 27,000 tons of the unrefined imported article were treated at the Osaka establishments alone.

TOBACCO, CIGARETTES, AND CIGARS.

In the years 1898 and 1899 there was an enormous influx of leaf-tobacco to supply the cigarette manufactories of Osaka and other growing demands, the total import for the two years being of the value of close upon a million sterling.

A large amount of native tobacco is grown in Japan, and this is much employed also in the making of cigarettes mixed with the leaf of Virginia and other American brands. But Japan imports, nevertheless, large quantities of cigarettes from Great Britain, and a considerable number of cigars from the Philippine Islands.

The consumption of tobacco in Japan for the year 1898 may be taken as having fallen but little short of the figures given below in value, and this may serve as an indication, approximately correct, of the present annual consumption. The figures are in pounds sterling :

Value of native-grown tobacco	...	£1,527,300
Imported leaf	... ..	508,635
„ cigars	... ..	19,857
„ cigarettes	... ..	172,082
		<hr/> 2,227,874

	1895.	1896.	1897.	1898.
CIGARS :	£	£	£	£
China - - -	206	—	—	—
France - - -	99	—	—	—
Germany - - -	517	1,105	1,131	2,060
Philippines - -	8,917	8,882	11,634	15,574
United States -	274	481	336	377
Great Britain -	—	81	28	102
Holland - - -	—	—	843	651
Other countries -	720	1,039	1,138	1,091
CIGARETTES :				
British America -	—	—	816	406
China - - -	301	204	918	1,408
Egypt - - -	—	—	—	426
Germany - - -	282	946	1,081	4,039
Great Britain -	3,881	15,148	36,451	42,334
Italy - - -	274	372	628	911
Philippines - -	2,886	2,119	1,306	1,247
Russia - - -	—	82	288	524
United States -	22,058	37,775	57,335	120,328
Other countries -	702	773	895	153

WATCHES.

Cheap clocks and watches were among the earliest of Japan's wants to be discovered at the dawn of the Meiji era, for the system upon which time had been kept by the old-fashioned clocks in use prior to that date was a Chinese system, and was susceptible of improvement. The day, from sunrise to sunset, was divided into six parts; so was the night, between sunset and sunrise. Obviously this method, to be accurate, involved a daily correction, in accord with the shortening or lengthening of the day. It was always 'mutsu-doki,' or six o'clock, a.m. or p.m., when day broke or evening set in, and only at the equinoxes were the six 'hours' of the day the precise counterparts of the six hours of the night. The mechanism of the clocks was creditable to Japanese ingenuity and workmanship; the bells on which they struck the hours were of magnificent tone, but the time that they kept was not in conformity with any practicable method of conducting a train service; and so, when the railways came into general use, the 'grandfather's clocks' of Japan were superseded. If any of them are in existence now they should be veritable curiosities.

Switzerland is the gainer by the existing demand in Japan for watches. Until last year the United States supplied a large proportion, and France likewise sent some, but the cheaper product of Geneva has ousted for the most part its higher-priced competitors.

The actual import was greatest in 1898, when £296,021 worth of watches were declared at the Customs. It fell off in 1899, doubtless because in 1898 the import was in excess of actual requirements, but it had partially recovered in 1900.

The latest figures go to indicate that whilst France supplies 5 per cent. and the United States about 14 per cent., Switzerland's contribution fully equals 75 per cent. of the whole value of the import, which in 1900 was a trifle under £75,000.

WOOL.

As compared with 1899, the import of woollen manufactures during 1900 increased enormously, the totals being, for 1899, £1,373,902, and for 1900, £2,150,856. In the raw material there was actually a diminution in the quantity imported, but in yarns the value was trebled, and amounted in 1900 to 733 tons. Of cloth

some 600,000 yards more were received, the total for 1900 having been over $2\frac{1}{2}$ million yards; flannels rose from 766,563 yards to 1,575,181 yards, and mousseline de laine, alluded to elsewhere, showed an increase in quantity of 7,000,000 yards. Other woollen tissues were imported to the value of £301,007, as compared with £69,233 in the previous year.

There are several woollen factories in Japan itself, where woollen cloths and blankets, mostly for the use of the army, and such textiles as flannels, travelling-rugs, shawls, etc., are made, to a certain extent, for the home markets. Woollen yarn, however, is not yet spun in those mills. It is imported, not from England, but mostly from Germany. Of the woollen cloth imported, however, practically two-thirds is received from Great Britain. The raw material is derived principally from Australia and Germany, in about equal proportions, China supplying one-fifth, and British India a smaller fraction of the whole, which in 1900 reached the value of £400,000. Germany now supplies 93 per cent. of the flannels imported by Japan, and though in 1900 the British figures rose considerably above those of 1899, the total was but one-third of that for 1898, when Great Britain was credited with a sale of £16,020 worth of this article to Germany's £121,991. In the last two years the proportions have been :

			Germany.			Great Britain.
			£			£
1899	...	...	35,498	...	...	2,728*
1900	*	...	86,370	...	...	5,602*
			Germany.		Belgium.	Great Britain.
			£		£	£
1899	...	62,944	...	5,370	...	129,280†
1900	...	97,586	...	15,216	...	176,998†
			* Flannels.		† Woollen cloths.	

MOUSSELINE DE LAINE.

France sends to Japan the greater part of the total import of this article, though Germany, Belgium, and Switzerland each have a share in the trade. Mainly it is in the plain form that the material reaches Japan, the printing of it being done in Osaka or Kyoto. The industry is, of course, quite modern to those cities, but the quantities dealt with are considerable. In 1894 the actual length was 19,042,850 yards, having a value of over £315,000.

The totals have fluctuated somewhat since that year, as the table below proves, but 1899 showed an appreciable advance upon 1894. In 1900 the rise over the preceding year was enormous.

			£
The imports in 1895 were of the value of			363,346
1896	..	..	649,816
1897			383,588
1898			440,875
1899			435,093
1900	~		751,843

The Japanese weaving establishments are beginning to make their competition felt in this staple, and the extraordinary advance in the import in 1900 over 1899 was due mainly to the fact that extremely low stocks were held in Japan at the end of 1899.

The British Consul at Kobé has pointed out that mousseline de laine is an unsurpassed material for women's dresses in a climate like that of Japan, which is sub-tropical, but subject to frequent and great fluctuations of temperature. For years past it has been the leading staple in woollen imports, yet not a yard of it reaches Japan from the United Kingdom.

ITALIAN CLOTH.

England has still the largest share of the import trade in this article. Among other uses to which it is put in Japan is the manufacture of cheap umbrellas of the foreign (*komori*, i.e., bat's-wing) pattern. Up to 1898 Germany steadily increased her proportion of the total import, as the subjoined figures show; but in the two years which followed her share was appreciably reduced.

		Great Britain.		Germany.	
		Yards.	Value.	Yards.	Value.
			£		£
1893	- -	6,035,978	142,576	168,873	6,280
1894	- -	6,348,086	170,587	87,987	4,236
1895	- -	3,109,547	87,291	78,434	4,859
1896	- -	8,949,835	270,927	148,229	8,935
1897	- -	5,699,691	169,404	240,377	10,569
1898	- -	3,088,231	94,241	391,764	14,145
1899	- -	3,053,157	112,559	71,652	2,581
1900	- -	2,473,335	105,410	186,708	7,264

PRINCIPAL COMMODITIES IMPORTED.

	1893	1894	1895	1896	1897	1898	1899	1900
Alcohol - -	£ 37,947	£ 17,418	£ 44,090	£ 48,146	£ 96,936	£ 269,998	£ 206,080	£ 13,480
Alizarine dyes -	-	11,088	19,255	12,173	10,423	14,936	-	-
Aniline dyes -	40,504	54,319	68,213	113,992	93,119	121,884	90,401	135,643
Beans and peas -	344,663	297,729	255,476	347,501	588,961	710,110	882,211	491,813
Blankets -	81,102	57,280	156,942	193,248	60,829	48,031	22,903	?
Calicoes -	?	?	307,149	405,776	378,380	438,250	357,519	417,218
Candles -	4,183	7,057	21,454	10,616	5,665	5,306	-	-
Cannon -	28,031	16,137	93,948	19,394	21,201	33,066	-	-
Canvas -	1,814	9,167	25,440	22,898	5,163	6,975	-	-
Carriages, railway	15,285	15,510	64,321	36,316	90,574	66,011	70,500	62,000
Cartridges -	669	2,554	29,145	1,913	2,056	3,807	-	-
Caustic soda -	19,242	20,546	23,400	8,426	22,959	42,271	53,272	94,889
Chintzes, i.e., printed cottons - -	63,590	52,169	38,336	119,316	98,644	117,678	143,824	204,445
Chlorate potash	74,231	84,064	41,905	42,904	49,765	63,205	42,756	69,346
Cigarettes -	25,464	23,234	30,387	57,423	99,723	173,082	76,059	-
Coal -	8,170	47,275	85,308	51,938	57,857	39,918	95,661	214,380
Cotton, raw	1,529,489	1,910,392	2,430,481	3,211,627	4,312,226	4,574,437	6,136,575	5,971,875
" yarn	728,424	797,736	770,297	1,137,200	962,525	854,758	496,332	718,977
" satins	84,245	125,480	78,430	255,845	171,908	141,442	94,975	-
" drille -	6,480	17,259	51,997	31,154	55,073	10,578	42,421	462,415
" threads -	11,612	11,120	32,894	17,268	25,323	35,877	-	-
" velvets -	48,966	70,015	48,606	100,135	67,705	81,328	-	-

PRINCIPAL COMMODITIES IMPORTED—continued.

	1893	1894	1895	1896	1897	1898	1899	1900
Cotton kerchiefs	16,461	19,984	20,468	41,034	20,147	30,194	169,718	417,218
Cotton on the seeds	85,667	50,683	51,728	46,707	49,795	33,391	86,256	99,187
Dynamite	8,456	13,750	23,149	15,427	32,526	50,759		
Dynamo-electric plant	13,864	22,619	31,101	68,174	109,248			
Flannels	138,971	30,883	96,133	199,724	118,765	136,003	37,495	93,705
Flax, hemp and jute	32,633	53,792	64,584	70,816	85,749	59,051	127,099	178,583
" yarn	19,866	13,071	70,863	39,809	22,966	25,098		
Flour	31,965	61,900	40,685	99,420	115,656	202,241	137,085	398,274
Gunny bags	10,510	17,128	60,630	10,872	11,532	1,496		
Hides	41,266	39,489	69,598	53,967	34,639	58,794	73,493	67,032
Indigo, dry	44,420	32,986	58,137	106,735	153,802	227,081	290,382	398,386
Iron, bar and rod	97,578	133,903	208,868	235,970	304,613	406,180	260,367	535,264
" nails	88,779	133,263	127,805	144,025	145,829	115,034	222,343	222,650
" plate and sheet	45,644	88,918	103,879	133,688	117,526	140,585	222,041	637,557
" pig	44,647	74,355	67,376	73,955	93,401	138,142	96,554	98,297
" pipes and tubes	12,288	48,408	60,745	89,133	89,458	133,294	95,343	304,381
" ware	45,166	65,119	45,262	12,892	17,440	11,992		
Italian cloth	148,930	175,979	92,174	281,309	181,558	106,829	115,617	114,403
Kerosene	440,104	513,553	432,392	633,103	766,735	755,287	791,814	1,445,770
Lacquer	8,436	8,755	14,571	16,271	24,481	20,772		
Lead	14,932	17,763	31,363	25,738	25,780	36,520	42,074	94,646
" tea	13,680	16,624	17,974	11,823	15,139	14,822		
Leather	43,693	59,884	109,282	171,845	138,008	105,021	108,932	212,944

PRINCIPAL COMMODITIES IMPORTED—continued.

	1893	1894	1895	1896	1897	1898	1899	1900
Leather, sole -	21,570	28,178	49,777	57,658	46,252	91,689	£ ?	£ ?
Liquid gold -	12,998	4,920	11,052	12,971	7,430			
Locomotives -	35,653	158,027	156,369	162,076	423,561	426,585	196,837	185,620
Logwood, extract -	26,528	30,385	21,883	34,944	27,993	23,878		
Machinery, spinning -	191,201	285,832	189,619	299,236	540,170	308,876	77,323	
" weaving -	4,750	8,926	24,696	23,946	40,731	15,015		
" boilers, engines	15,795	21,515	43,192	82,269	131,726	69,717	33,396	78,936
Machinery -							499,412	768,566
Mercury -	11,508	12,754	14,130	13,930	15,652	17,630		
Mousseline de laine -	230,550	315,082	363,346	649,816	383,588	440,875	435,093	751,843
Oil-cake -	59,989	82,219	94,602	322,060	331,558	461,496	679,181	581,512
Paint, in oil -	9,613	14,810	29,288	27,214	36,743	23,878		
Paper -	24,592	40,518	47,737	77,094	79,157	32,597		
" for printing -	21,769	25,785	30,769	72,343	85,695	228,321	74,841	207,928
Paraffin wax -	15,061	26,301	26,634	19,253	32,791	27,034		
Phosphorus, amor-								
phous -	16,663	17,823	36,082	17,489	38,363	29,825	22,063	?
Rails -	66,710	120,920	92,553	259,545	332,500	263,172	43,505	485,239
Railway materials -	14,764	88,180	125,334	128,048	200,111	62,567		
Rice -	325,484	841,314	435,309	566,263	2,152,842	4,821,981	596,016	920,948
Salicylic acid -	14,624	19,367	28,558	18,733	11,993	25,689		
Saltpetre -	7,393	13,693	30,053	16,707	9,572	19,612		
Seeds, sesamé, etc. -	30,121	32,877	57,648	40,667	64,357	12,465		

PRINCIPAL COMMODITIES IMPORTED—continued.

	1893	1894	1895	1896	1897	1898	1899	1900
Shirtings, gray -	231,512	293,503	307,149	405,776	378,380	438,250	} 427,094	743,330
" white	16,830	33,760	50,572	65,544	25,086	90,834		
Silk, raw, cocoons, etc.	6,149	16,353	52,926	35,668	35,296	60,005		
Steamships -	86,542	820,254	470,055	172,449	823,264	748,819	362,098	270,919
Steel -	29,601	36,236	50,357	80,442	47,667	98,366	97,459	117,785
" ware	20,132	19,060	29,343	27,949	26,027			
Sugar, white	793,730	868,974	764,586	2,023,115	1,498,963	2,105,533	915,630	2,716,083
" brown	351,472	455,184	407,424	348,058	480,945	733,369	835,973	
Tea-cloths	20,867	21,231	24,146	14,088	8,640	7,188		
Telegraph-wire	12,198	14,221	20,571	50,649	47,777	40,884	83,422	111,839
Tin -	8,057	17,906	19,193	14,641	14,517	22,725		
Tinplate -	6,526	35,267	31,404	25,096	55,990	41,142	58,179	84,948
Tobacco, leaf	?	?	?	3,556	32,085	452,766	508,635	46,375
Turkey-reds	36,358	22,528	41,879	39,508	49,459	43,389	42,564	43,362
Watches -	52,312	40,464	92,302	189,478	190,181	296,021	23,771	74,495
Wine -	17,467	22,277	31,482	39,006	38,332	49,324		
Window-glass	35,931	24,603	30,980	57,044	48,809	66,980	128,275	97,277
Wool -	42,512	56,719	113,695	99,830	105,748	164,281	432,442	400,133
Woollen cloths -	112,027	81,682	372,030	411,405	224,407	280,360	200,419	306,163
" yarn	51,393	58,350	95,103	111,487	133,742	78,519	59,333	183,600
Zinc -	33,902	42,685	50,086	45,370	73,457	55,644	92,844	90,112

RECAPITULATION OF IMPORTS, 1900.

					£
Raw Cotton	...	...	...	...	5,971,875
Cotton on the Seeds	...	...	...	...	99,187
Cotton Manufactures	...	...	...	...	2,589,477
Raw Wool	...	...	...	...	400,135
Woollen Manufactures	...	...	...	...	1,750,721
Metals	...	...	...	...	3,021,113
Machinery and Instruments	...	...	...	...	1,440,535
Dyes	...	...	...	...	534,029
Drugs and Chemicals	...	...	...	...	177,715
Sugar	...	...	...	...	2,716,083
Miscellaneous	...	...	...	...	10,623,776
					<hr/>
					29,324,646

SECTION IV.

PRODUCTS.

THE industrial pursuits of the Japanese may conveniently be regarded as divisible into two great classes: those which were characteristic of the Empire from very early days, and those which were introduced subsequently to the re-entry of Europeans in the second half of the nineteenth century. The expression 're-entry' is perhaps admissible here, for, although the Dutch and Portuguese were welcomed at Nagasaki for a period of some three decades—at the close of the sixteenth and beginning of the seventeenth centuries—practically nothing new reached Japan from the outside world, after A.D. 1624, save through China, until 1854. And from that date onward, of course, the Mikado's people found that they had much to learn. The other nations of the earth had not been standing still whilst Japan remained in seclusion, though even in the West the more striking innovations were generally seen to be of comparatively recent origin. Lighthouses and telegraphs, steamships and railway locomotives, were all of them, in 1854 (when Commodore Perry and his 'black vessels' entered, uninvited, the Bay of Yedo), to be classed as civilizing agents of the newest pattern, but the possession of them gave to the Occident an immense advantage over the Orient. Realizing this, the subjects of the Tenshi set vigorously to work to make up for lost time. They betrayed no intention, nevertheless, of permanently abandoning their distinctive arts, and, after a brief suspension of output, there has, in late years, been observable a very satisfactory revival.

In Class I., among the original or native industries, must be included:

Bamboo and other wood-work
Ceramics

Embroidery
 Ivory carving
 Lacquer
 Paper-making
 Raw silk production
 Weaving

and the manufacture of

Camphor
 Indigo
 Native wine (*sake*)
 Salt
 Soy
 Sugar
 Tea
 Tobacco
 Vegetable wax.

Practically all these arts were derived from China centuries ago, and were diligently fostered in pre-Restoration days by the feudal princes, whose rule within their own territories was all but absolute.

Class II. is composed of those manifold industries which Japan has established upon her own soil since 1868. Under this head must be placed

Cotton spinning and weaving by foreign machinery
 Shipbuilding
 The construction of all kinds of machinery and scientific apparatus
 Woollen manufactures

added to which Japan now undertakes extensively the manufacture of

Bricks
 Cement
 Drugs and chemicals
 Glassware
 Matches
 Paper
 Soap
 Wine.

To appreciate the extent to which these modern industries have

taken root, it is only necessary to refer to the figures which follow. It will be observed that hydraulic machinery is largely utilized in Japanese factories, and the country is well supplied with water-power throughout.

Total number of factories at work in the Japanese						
islands	...	...	...	...	...	7,287
						<hr/>
Factories employing steam-power	...	...				1,671
Number of engines in use	...	...	...			2,992
Horse-power of ditto	...	...	...			55,968
Factories using water-power	...	...	...			832
Number of engines in use	...	...	...			1,520
Horse-power of ditto	...	...	...			2,946
Factories using both steam and water power	...					407
Number of engines therein run by steam	...					463
Ditto by water	...	...	...	...		905
Horse-power thereof, steam	...	...	...			2,889
Ditto, water	...	...	...	...		1,631
Factories using neither steam nor water power						4,377
						7,287

It will be seen that there is still abundant scope for the application of modern machinery to Japanese industries.

AGRICULTURE.

In writing of Japan it is fair to allude to her agriculture as the fundamental basis of her prosperity, and it is in reality the life of the nation. It is to this industry that the country owes its ability to pay its way, and but for the existence of the peasant farmer—who, by a more or less cheerful acquiescence in the imposition of a heavy land tax, made it practicable for the newly-formed Central Government of 1868 to pension the hereditary nobility, and yet retain sufficient funds in hand wherewith to carry on the task of administration upon a Western model—it is difficult to see where the money could have been found for the consummation of so vast a change of system as that which the world witnessed in the early years of the Meiji era.

Prior to the Restoration the feudal chieftains (*daimios*) had been in the habit not merely of oppressing the tenantry in their various principalities by the institution of forced labour upon their reclamation and other enterprises, but of extracting, through the agency of their stewards, the uttermost *zeni* from the farmers' slender purses in the form of rent. The reformed Government at once undertook to substitute for the unequal scheme of land taxation previously in operation a system based upon the actual market value of the property. The revenue derived from the land tax at the present day amounts to one-fourth of the Government's ordinary income, but the proportion was very much larger before the public works, inaugurated under the new régime, and other revenue-yielding undertakings, began to show appreciable profits. As recently as 1893-94 this item amounted to almost a moiety of the whole State revenue. Thus the Japanese farmer, especially since 1889, when the new Constitution came into force, has been a power in Japan's politics, and, as the primary source of the nation's wealth, he is, no doubt, entitled to predominance in the Diet. It must be confessed that his parliamentary representatives at Tokio usually contrive to present his views with force and cogency.

The latest returns show that taxes are paid by the agricultural population upon a superficial area of a trifle over one-third of the entire area of the Japanese islands—that is to say, that the land actually under cultivation, or that may otherwise be depended upon to yield a revenue to the State, is, roughly, 33½ million acres in extent, out of a total area for the Empire of 94½ million acres.

For the purpose of comparison, and that it may be fully realized what these figures imply, the acreage under crops in the British Isles is here given upon a similar basis :

Total area of United Kingdom ...	...	77,675,572 acres.
Acreage under crops ...	...	47,795,270 „

Included in this lower total, however, are 28,100,672 acres of land permanently devoted to pasture, and there are no fewer than 6,105,832 acres cropped with clover, etc., under rotation, so that the land actually devoted to the growth of corn and green crops is but a trifle over 13 millions of acres in extent. Year by year this total is being reduced, there being a diminution in arable land under

cultivation in Great Britain, and an augmentation in that under permanent pasture.

Compare this state of things with Japan, remembering that the average inhabitant of Japan eats much less than the average Englishman. Until very recent years the Japanese grew enough of rice and other cereals to feed themselves, independently of imports from abroad, and could almost do so still, were it to their advantage to close their doors against foreign grain.

In Japan the area devoted to rice cultivation, according to the latest returns, was 6,709,608 acres; to other cereals, about 4,476,500 acres; and to green crops, including millet, potatoes, peas, hemp, tobacco, etc., about 4,260,000 acres. In themselves these figures are not so very much in excess of those of the corn-bearing and food-raising areas of the United Kingdom, and in proportion to the square mileage of the British Islands, as compared with that of the Empire of Japan, the divergence becomes trifling. When we turn from the relative extent of the areas under cultivation to the relative yield in edible corn obtained from those areas, we do not find that the climatic advantages which Japan possesses over the United Kingdom enable her to show better returns. Probably there is much less capital invested in Japanese agriculture than in English agriculture.

In Great Britain the total yield from 8,803,600 acres devoted to the growth of cereals is:

	Bushels.	
Wheat -	67,260,569	} 307,932,815
Barley -	74,532,406	
Oats -	166,139,840	

whilst in Japan the production of cereals from 11,186,108 acres annually reaches:

	Bushels.	
Rice* -	197,951,610	} 293,306,620
Wheat -	20,288,350	
Barley -	42,036,385	
Rye -	33,030,275	

The net result of the calculation, therefore, is to show that, whilst Japan does not grow oats, she succeeds in producing grain for the food of man to the extent of 293½ millions of bushels, as against the

* Second only to India in the production of this crop.

United Kingdom's wheat production of $67\frac{1}{4}$ millions of bushels. With us the barley that we grow is but little used for food, but in Japan both barley and rye are eaten freely. As a consequence of our growing but $67\frac{1}{4}$ millions of bushels of wheat, we are obliged to import annually some 25 million quarters—say 200 millions of bushels—of that grain for our own consumption. Japan, on the other hand, produces nearly 200 million bushels of rice, plus 95 million bushels of wheat, rye, and barley, and in order to feed her population of $46\frac{1}{2}$ millions, she is only obliged to supplement her own cornfields' yield to the comparatively small extent of 26 millions of bushels of rice or thereabouts per annum.

In other words, though the areas devoted to the cultivation of grain are about the same in proportion to the total square mileage in both the United Kingdom and Japan, the cornfields of Japan produce exclusively food for human consumption, whilst in those of the United Kingdom we grow two and a half bushels of oats as fodder for horses to every bushel of wheat for the use of man.

The principal green crops produced in Japan in one year, according to the most recent calculations, are as under, and side by side with them are given, in two cases, the latest figures for the United Kingdom, as a basis of comparison.

				<i>Japan.</i>	<i>England.</i>
				English bushels.	English bushels.
Beans and peas ...	...	...	...	18,917,550	11,996,992
Millet (three sorts) ...	...	...	...	19,099,750	—
Buckwheat ...	...	...	...	5,964,030	—
Colza ...	...	...	...	5,397,970	—
				English tons.	English tons.
Potatoes ...	...	...	...	2,771,342	5,837,000
Cotton ...	...	...	...	26,865	—
Hemp ...	...	...	...	13,933	—
Tobacco ...	...	...	...	30,546	—
Indigo ...	...	...	...	65,529	—

Formosa was given separately in the Japanese return, and it may be of interest to retain the distinct figures in this instance, as in some degree showing what crops may be expected from this latest addition to the Mikado's empire.

Corn (maize, millet, etc.)	...	...	1,144,585 bushels.
Peas	...	...	360,150 „
Potatoes	...	...	204,500 tons.
Tobacco, leaf	...	...	292 „
Hemp and flax	...	...	1,512 „
Indigo	...	...	1,820 „

One of the most serviceable methods of comparison that can be devised is the relative production per *tan* in the several large islands that form the bulk of the Japanese Empire. A *tan* is, roughly, one quarter of an acre.

The average yield per *tan* is thus seen to be greatest in Central Nippon, where it amounts in *rice* to 1·48 koku, or 7·4 bushels, and least in the extreme northern island (Yezo), where it falls to 1·12 koku, or 5·6 bushels, the average for the whole of Japan being 7 bushels to the *tan*, or, as nearly as may be, 28 bushels to the acre.

Rice is, of course, the best crop that the land yields, but *barley* likewise gives a satisfactory return. The yield for the whole of Japan averages 25½ bushels to the acre.

Wheat is a less important crop, and the yield is 17½ bushels per acre.

Rye affords a paying crop of 19½ bushels per acre. In all four cases the most productive *tan* are in Central Nippon. Western Nippon comes next in the order of fertility, and Kiushiu third, for rice, but North Nippon beats them both as regards barley. Wheat gives fair results in Yezo, as also barley and rye.

In the total of 33½ millions of acres which are taxed to provide a revenue for the Government of Japan, there are, as already shown, close upon 16 millions of acres, or nearly one-half, devoted to the production of grain and other crops for the food of the people, as against 13 millions of acres in Great Britain.

The other landed property taxed in Japan comprises forest and mountain areas, salt-pans, thermal springs, certain ponds and marshes, and a small percentage of moorland, in all amounting to about 17½ millions of acres, among which forests and mountains together show a total of about 15 millions of acres.

The uncultivated areas not hitherto brought under taxation are principally in the northern island of Yezo, where the revenue-yield-

ing land area constitutes but some 73 square miles out of a total area for that island of 36,600 square miles. Obviously there is a vast field for human energy, if settlers can contrive to withstand a somewhat rigorous climate, in the *Hokkaido* of Japan.

Having at some length reviewed the agricultural and other products of the Japanese Empire, it is time to consider the extent of its available resources for an export trade. The mercantile community of Japan have had, since 1870, an uphill struggle to establish the manufactures of the country upon a sound and profitable basis. Expensive machinery had to be bought, and has still to be bought, in order to equip the factories with appliances which, in conjunction with certain natural advantages of climate, may afford maximum facilities for competing successfully with the well-founded and firmly secured industries of the West. The Government has undertaken to foster some industries, and vigorously to promote by every possible means the growth of all. In pursuance of this policy it has undertaken extensive public works and other schemes that were obviously incapable of yielding, until after the lapse of years, any margin of profit. That these projects have been for the most part successful says much for the wisdom and judgment evinced in their adoption, and the people at large are already reaping the benefit. When, by efficient roads and other means of communication, the producing districts shall have been brought without exception into touch with the ports of shipment, the volume of exports cannot fail to rise still more conspicuously than it has done even in the past. And how rapidly the external trade of Japan developed within a very recent period is to be gathered from a brief study of the data that will be brought forward in the remaining portion of this chapter. Merchants, however, who export to Japan may be encouraged by the law that the greater the exports the greater must also be the imports, and, the more the wealth of a people increases by foreign trade, the greater must be its demand for foreign products.

First on the list of exports are those agricultural products of the empire by which Japan first entered into the markets of the world. The second class includes mainly those manufactured goods for some of which she has long enjoyed a high reputation, whilst for others she is diligently seeking to procure customers. Her mines already produce a surplus for exportation, and these exports are indisputably growing, and, at the existing annual rate of augmentation, will

soon attain great importance and prove an immense source of wealth.

For the harvest of her seas she has always an excellent market in countries contiguous to her own coasts.

Raw silk ranks highest among exported products, and far in advance of any other commodity in value. Cotton yarn, silk piece-goods, coal and copper, all figure prominently in the list, and tea, matches, cotton piece-goods, silk waste, silk handkerchiefs, straw-plait, rice, mats and camphor, follow in the order named. After these come porcelain and earthenware, and lacquer and bronze. Timber is likewise an export to a limited extent, as also are fans, umbrellas of European pattern, and mushrooms.

CAMPHOR.

The production of camphor in Japan itself is said to have been quadrupled within the last five years, and the latest returns show the natural consequence—a heavy fall in value of this export from £9 10s. per 133 lb. to £7 10s. in Osaka; whilst in London the selling price per cwt. dropped to £7 17s. in the summer of 1901.

Yet the export from Japan was so much increased that in April, 1901, the value for that month was £42,975, as compared with £27,886 in the same month of 1900.

In March, 1900, the camphor monopoly in Formosa was put up to auction, the contract being secured by a London firm. It was to run for three years from the date of taking effect, and the quantity to be disposed of was estimated at from 4 to 6½ million lb. per annum. The Government selling rate was to be £9 14s. per 133 lb. for the best quality, and £8 13s. 7d. for second quality. Six months prior to its expiry the question of a renewal of the contract and future terms were to come up for consideration. The firm which entered into the contract found that the increased output in Japan itself having brought down the price, it was impossible to dispose of the Formosa product at so high a figure as that which had been agreed upon. Foreign firms in Kobe and elsewhere were able to buy camphor at £7 6s. per 133 lb.

The Formosan authorities, who have since 1898 had a monopoly in that island, then sought to arrange for the entire camphor output of Japan to be bought up by their agents, the Mitsui Bussan Company, and sold only through the Formosan Government, together

with the local product, at a price to be fixed, with the object of creating a Formosan 'corner' in this staple. It was asserted that the Japanese Department of Commerce and Agriculture was disposed to look favourably upon the scheme, tempted, perhaps, by the annually increasing profits which it was declared had been made by the Formosan Government. These gains had risen from £42,000 in 1898 to something like half a million sterling in 1900; but there were difficulties in the way of establishing a complete monopoly, owing to the forestry regulations in force in other divisions of the empire than Formosa.

The total export for 1900 from Japan was 1,937 tons, valued at £313,467, against 1,642 tons for 1899, value £179,105. It will be observed that the estimated total value had greatly risen in 1900 in proportion to quantity, so that the fall of 1901 was partly a reaction from the rise of prices in 1900.

It may be useful to quote the figures for the past eight years :

TOTAL EXPORT OF CAMPHOR FROM JAPAN.

Year.	Tons.	Value.
		£
1893 - - -	1,480 $\frac{5}{8}$	130,861
1894 - - -	1,233	102,395
1895 - - -	1,332 $\frac{1}{2}$	152,683
1896 - - -	963	111,919
1897 - - -	1,552 $\frac{1}{2}$	131,829
1898 - - -	1,448 $\frac{3}{4}$	117,457
1899 - - -	1,642	179,105
1900 - - -	1,937	313,467

Camphor is chiefly exported to Hong Kong (60 per cent.), United States (30 per cent.), and British India (4 per cent.). Independently of Formosa, where it ranks as one of the most valuable products of the island, camphor is manufactured in all the provinces of Kiushiu, in two of Shikoku, and in several of those of Nippon, which border the Pacific—viz., Kii, Idzu, and Suruga.

There are four kinds of camphor—viz., perfect-dried, well-dried, local, and residue. The first two terms explain themselves. By local is meant the camphor in its original state, as brought from the places of its production, and by residue, the same separated from the

camphor oil. The fully-dried camphors find their way mainly to Europe and America, the local and residue principally to China.

The abundance of camphor-trees (*Kusu-no-ki*) in the island of Kiushiu was noted by Kaempfer in his account of a journey from Nagasaki to Yedo in the seventeenth century. The tree which he alludes to as standing in the centre of the village street of Ureshino, thirty miles north of Nagasaki, and which was an old tree then, is still standing, a link with the past, though now only a shell.

MATS, MATTING AND CARPETS.

It is unquestionably due to the steady improvement manifested in the manufacture, the careful selection of materials, and the artistic designs which are introduced, that the export of Japanese mats is largely on the increase. The principal centres of production are in Bizen and Bingo, bordering the Inland Sea, and in Bungo and Chikugo in the island of Kiushiu.

Ninety per cent. of the floor matting is exported to the United States; the remainder is shared between British America, Australia, Hong Kong, and Great Britain.

Carpets fell off in demand in 1899, and the export has steadily declined since 1895. In that year it was valued at £163,590, but in 1899 the total reached £72,112 only.

CERAMICS.

The latest figures show that Japan's output of porcelain and pottery has considerably diminished of late, the totals for 1898 indicating a production for the whole of Japan of ware valued at £496,531, as compared with £520,518 in 1896. The reduction in the number of workers, and of the establishments where the potter's art is pursued, was most noticeable, the figures being as under:

		1896.		1898.
Workpeople engaged	...	26,233	...	20,606
Establishments	...	5,004	...	4,386

Central Japan is the principal pottery district, more than half the potteries and three-fifths of the workpeople engaged in the industry being found in that division of the empire. Western Japan and Kiushiu contain nearly all the other establishments. There are but few in Northern Nippon or Shikoku, and only two in Yezo.

				£
In 1899	the export	was valued	at	222,678.
„ 1900	„	„	„	252,340.

In 1898, when the total production of the country was valued at £496,531, the quantity exported was of the declared value of £199,078.

COAL.

For more than four centuries coal has been mined in Western Japan, more particularly in the provinces of Hizen and Chikugo, in the island of Kiushiu. The feudal chieftain of Hizen, Prince Nabeshima, owned collieries there in the days prior to the Restoration, and English engineers were then engaged in the undertaking. Subsequently, after the trade of Nagasaki had begun to assume large proportions under the provisions of the treaties with foreign Powers, the Takashima mine, situated on an island almost at the entrance to the harbour, was vigorously worked, and developed apparently inexhaustible veins of coal that have since that period been drawn upon continuously for steamers and general use. Takashima coal obtained for itself a name throughout the East, the mine having been leased by Glover and Company, of Nagasaki, in 1866. Its output was greatly increased under the auspices of that firm, and even at the present day the Takashima Colliery is better known to Europeans than perhaps any other in the East, though much more extensive mines are owned by the Mitsui Bussan Company. Its coal-field of Miiké is situated half in Higo province and half in Chikugo, on the borders of the Shimabara Gulf, and has a total area of fully 16,000 acres. In one direction the seam crops out, and its existence appears to have been known to the peasantry of the region from very early days. According to local tradition coal was first mined at this spot in the year 1468. There can be no doubt that long before the Restoration coal obtained from this mine was used on the shores of the Shimabara Gulf in the making of salt, and it is said to be still in great request for that industry, on account of its highly bituminous nature and the great heat that is given off to procure a rapid evaporation of the brine.

The Japanese Government purchased the Miiké mines in 1873 from the then proprietors for about £8,000 sterling. At that time pumping was done by native tread-wheels, and the draining was effected by gullies, the coal being worked, when the water per-

mitted, in galleries driven inwards from the outcrop on the side of the hill. Convict labour was at first employed by the State, but in 1876 the entire management was transferred to the great banking and commercial house of Mitsui and Company, by which it subsequently was carried on under the title of the Mitsui Bussan Kai-Sha, with depots all over the East, and offices in London, China, the Straits Settlements, and India. Shafts were sunk, pumping machinery and mining plant were imported from Leeds, and excellent results were obtained. Ultimately, in 1889, the entire property was sold by the Government to Mitsui and Company outright for the sum of 4,550,000 dollars, equal at that time to about £750,000.

The Kiushiu Railway connects the mine with Moji, and conveys the Miiké coal thither, to a very considerable extent, for shipment. It also is exported from Kuchinotsu, a port at the entrance to the Shimabara Gulf, and from Misumi, another port, which is close by.

Moji ships a vast amount of coal likewise from the Hizen mines of Karatsu, which is brought by railway to the Straits of Shimonoseki in the same way for convenience of sale.

At the end of 1900 Moji held an available stock equal to 250,000 tons, but this quantity is commonly far exceeded. It was low at the time named because there had been an abnormal demand for coal for the numerous men-of-war that were assembled in Far Eastern waters in consequence of troubles in China. The coal industry was perhaps the only one that profited by the state of things which, in 1900, existed in the adjoining Celestial Empire.

To China itself the sales actually fell off in comparison with the previous year, but to Shanghai, Hong Kong, British India, and the Philippines the export was perceptibly augmented. In all 3,349,548 tons were sent away from Japan during 1900.

The figures for the past few years are appended :

VALUE OF TOTAL EXPORT FROM JAPAN.

			£			£
1893	...	...	264,708	1897	...	745,726
1894	...	...	391,726	1898	...	1,224,062
1895	...	...	442,640	1899	...	1,548,080
1896	...	...	794,854	1900	...	2,044,943

An analysis of this return shows that the distribution down to 1899 was in the proportions which follow :

DISTRIBUTION OF COAL EXPORTS.

	1893.	1894.	1895.	1896.	1897.	1898.	1899.
	£	• £ •	£	£	£	£	£
Australia -	216	350	427	—	3,685	910	—
Austria -	—	—	—	—	297	—	—
Belgium -	—	—	—	—	220	—	—
British America -	—	• —	980	—	—	300	—
British India -	43,348	67,981	73,696	103,737	145,003	147,663	168,653
China -	90,278	120,793	199,116	231,183	317,632	468,194	540,689
Korea -	1,343	3,054	2,447	3,137	6,602	8,273	5,709
France -	526	1,172	—	—	—	*	—
French India -	—	903	—	—	—	5,999	—
Germany -	—	—	469	775	1,650	—	3,190
Hawaii -	948	1,230	—	869	1,450	1,185	800
Holland -	—	—	500	—	—	—	—
Hong Kong -	112,265	169,321	240,608	248,699	318,663	557,937	401,861
Philippine Islands -	7,831	16,758	9,817	8,330	8,232	4,137	11,611
Russia -	894	2,889	3,396	9,107	8,176	—	16,043
Siam -	—	—	125	—	—	—	—
United States -	6,782	6,703	4,725	11,665	21,679	10,049	9,125
Dutch India -	—	—	—	—	—	515	—
Russian Asia -	—	—	—	9,107	8,176	16,881	16,043
Other countries -	273	569	350	6,819	2,587	9,739	20,787

It is not improbable that Japan's largely increased export of 1894 was attributable in some degree to the great coal strike in England in the previous year, and to the fluctuations of exchange, which checked, more or less, the export of coal to the markets of the East from both England and Australia.

COPPER.

The purity of Japanese copper obtains for it a market all over the world, it having the highest known electrical conductivity of any specimen of this metal procurable. It contains 98 per cent. of absolutely pure copper, and for the manufacture of wire intended for use as submarine cable conductors it stands supreme. It is largely exported by Japan to Hong Kong, and to China and Great Britain, in the form of ingot copper, as brought from the mines. As bar or slab copper—that is to say, copper melted and made into bars, slabs or sheets, with the trade-marks of the manufacturers stamped upon them, and designated square copper, long pole, slab or sheet, as the case may be—it finds its way to British India, Korea and France, as well as to the countries named above. Both coarse and refined copper showed an increased export in 1900. As long ago as 1892 the total value was half a million sterling, but in the most recently published returns it stood at £1,299,105.

A comparison of the last few years' figures shows that the destination of the exported metal was as indicated in the following table. The total production for each year is given in addition, that the proportion of export to output may be clearly seen.

It is not possible, at the time of writing, to state accurately how much copper was mined in 1899 and 1900. But, inasmuch as the quantity exported far exceeded even the highest figures previously attained, and was, in 1899, even beyond the total yield of 1898, it is plain that the production must have been greatly stimulated.

From this table it will be seen moreover, that the exports to British India fell off in 1895, and were non-existent in 1896 and 1897. With 1898, however, the trade was suddenly revived to a degree even beyond the figures of 1893, and the increased demand has been a feature of more recent returns, though the actual totals are not yet available.

• France and Germany have become large buyers of Japanese copper, but the largest output is to Hong Kong. •

PRODUCTION AND EXPORT.

		1893.	1894.	1895.	1896.	1897.	1898.
		£	£	£	£	£	£
Austria - - -		—	—	—	—	292	3½
British India - -		22,812	18,526	4,815	—	4	25,546
China - - -		92,842	60,960	17,411	45,629	41,587	107,746
Korea - - -		22,302	3,047	3,424	7,050	14,453	13,993
France - - -		2,684	3,117	—	69	15,161	28,664
Germany - - -		11,134	22,831	57,651	47,564	61,825	99,233
Great Britain - -		19,107	62,066	43,736	59,018	48,311	14,187
Hawaii - - -		—	—	4,825	—	—	—
Hong Kong - - -		125,474	125,596	171,520	142,422	124,791	437,286
United States - -		—	1,478	—	—	2,940	—
Other countries -		191	—	6	—	18	44
Total Export } £		296,546	295,621	303,388	301,752	309,382	726,702
Tons		10,113	9,357	8,922	8,320	7,712	16,323
Total Production in Japan. } Tons		17,704	19,500	18,812	19,757	20,063	20,688

In the year 1899 the total export was 21,131 tons, valued at £1,162,054.
 .. 1900 20,134 £1,299,105.

• COTTON YARN.

The manufacture of yarn was originally undertaken by Japan with the primary object of supplying the home market, but the cotton-spinning industry speedily acquired such dimensions as to demand additional outlets for its energies. China was promptly exploited as a field for the profitable disposal of the surplus output of the Osaka and other mills, and, though it was open to China herself to produce sufficient yarn for her own consumption, and thereby nullify Japan's prospects of permanently establishing a market—and there was much talk at one time of her intention to do so—the export steadily increased, year by year, down to 1899, and in that year amounted to the very appreciable total of £2,291,153.

In 1892 the value of the export was only £772. In subsequent years it was as follows :

1893	£ 5,917	1897	£ 1,349,019
1894	95,553	1898	2,011,658
1895	103,447	1899	2,911,563
1896	402,942	1900	2,101,820

But in 1900 there was a falling off in the total export of over £800,000. The diminution was due entirely to the prevailing condition of uncertainty in regard to Chinese politics. Trade was paralyzed by events at Peking. It cannot be said to have entirely recovered even yet, but matters are in a fair way towards satisfactory settlement. Meanwhile, Japanese trade in yarns with Korea and Hong Kong, which are the nation's best customers after China, exhibits an upward tendency, for Korea, which is annually becoming a better market for Japanese commodities, took in 1900 a trifle more than before, and Hong Kong considerably more. The distribution of the export from 1895 to 1899 inclusive is shown below :

	1895.	1896.	1897.	1898.	1899.
	£	£	£	£	£
China - - -	68,308	352,404	965,458	1,441,191	2,291,153
Korea - - -	34,357	40,365	79,611	117,604	218,791
Hong Kong - -	762	8,593	301,591	451,706	346,952
British India -	3	490	2,179	45	—
Other countries -	16	1,087	178	1,111	246

Within the past year or so Japan has begun to export yarn to the Philippines, and the effort has met with some encouragement. The cotton-spinning industry now comprises over a hundred mills and smaller factories possessed of modern European machinery. Appended is a complete list of the plant in use and its output, with the average number of workpeople engaged, and other details sufficient to demonstrate how effectively this branch of cotton manufacture is being pursued in Japan.

For several years prior to 1900 it was financially in a more or less embarrassed condition, owing to the evil results of that tendency to overexpansion which ensued upon the conclusion of peace with China in 1895. These troubles culminated in 1900, when, owing to hostilities in Chih-li, the excellent market which Japan ordinarily finds for her yarns in Northern China was temporarily closed to her. Dearthness of the raw material completed the rout for the time being

THE COTTON-SPINNING INDUSTRY OF JAPAN.

Districts.	No. of Com-panies.	Capital. £	Spindles.	Approximate Pro-duction in Tons of Yarn.	Average Horse-power employed Daily.		Daily Average Num-ber of Operatives.		Annual Con-sumption of Coal in Tons.
					Steam.	Hydraulic.	Male.	Female.	
Tokio -	7	837,019	1,097,847	22,008	6,464	750	3,210	12,333	56,182
Tochigi -	1	40,000	10,000	765	150	150	108	420	3,256
Yamanashi -	2	6,250	4,955	251	—	65	73	177	—
Shidzuoka -	2	3,795	3,420	82	—	75	25	82	—
Aichi -	28	264,397	107,852	8,074	2,454	29	1,073	4,360	18,957
Miyé -	3	208,000	78,236	9,583	2,490	30	949	4,367	22,650
Toyama -	1	35,000	8,886	1,041	300	—	140	358	1,494
Miyagi -	1	16,000	15,000	64	—	40	13	42	—
Kioto -	4	117,267	31,984	2,746	350	595	317	1,308	3,925
Osaka -	15	846,480	345,856	66,665	10,110	25	5,221	14,863	109,858
Nara -	2	95,360	31,872	4,130	724	—	347	1,325	11,879
Wakayama -	2	95,000	20,235	2,834	730	—	234	1,124	8,812
Hiogo -	6	134,450	74,785	8,037	2,473	—	1,354	3,597	28,740
Okayama -	8	190,000	101,852	13,841	2,988	—	1,167	5,231	32,133
Hiroshima -	4	80,000	41,552	4,881	1,195	60	386	1,985	9,799
Tokushima -	1	28,000	5,376	1,038	180	—	105	254	2,647
Kagawa -	1	30,000	9,600	1,397	320	—	176	646	427
Ehime -	4	81,853	21,153	2,623	497	—	330	1,032	5,473
Fukuoka -	2	170,840	53,616	7,715	1,851	—	1,089	3,532	23,061
Oita -	1	38,369	10,368	1,362	350	—	165	628	435

of the Osaka spinners, who were obliged to run their mills on part time, and to have recourse generally to the principle of restricted production. All the 'Union' companies were compelled to discharge a proportion of their operatives during 1900; but there were still, at the beginning of 1901, no fewer than 16,154 male and 54,124 female operatives taking part in the industry. And matters have since so far improved that it is confidently expected in 1902 there will be a complete revival of prosperity in the cotton trade of the empire.

FANS.

The round fan (*uchiwa*) is most in favour in the United States, and England and Hong Kong rank next as buyers of that shape. But both the *uchiwa* and the folding fan, termed *ogi* (which is liked in France), are extensively exported by Japan, as the figures below go to prove. It is found by the makers that Europe prefers fans ornamented with pictures of flowers and animals, whilst America's choice tends toward more complicated drawings of scenery, etc. And there is a growing demand for fans to be used for purposes of advertisement. The chief centres of production are Tokio, Nagoya, Kioto, and Osaka, and whole families may be found occupied in the work, the elders splitting the bamboo and preparing the frames, whilst the younger members of the household affix the paper designs and trim the edges thereof.

Export to	1896.	1897.	1898.*	1899.
	£	£	£	£
United States - -	23,270	33,261	20,947	26,472
Hong Kong - - -	15,738	20,062	12,127	10,496
France - - - -	13,309	12,524	5,178	3,882
Other countries - -	17,072	22,713	11,671	12,367
Total - - - -	69,389	88,560	49,923	53,217

KEROSENE.

Echigo has for centuries been noted for its oil-fields. Mr. B. Lyman and his pupils in the Geological Survey reported very fully upon the resources of that region, and also on those of Yeso, as far back as 1877. But it is only within recent years that attempts have

been made to employ modern scientific methods in the extraction of the oil.

The greater part of the Echigo fields are now being worked by a company which in 1901 amalgamated with the Standard Oil Company of the United States. The joint enterprise is styled the International Oil Company. It is composed of Japanese and foreigners, and was launched under the auspices of the gigantic American corporation named. Most of the shares are held in the United States, though some were subscribed for by the merchants of Japan. The total capital stands at £1,020,833, in 100,000 shares of £10 4s. 2d. each, and there is every indication that the undertaking will eventually pay a huge dividend.

Some other portions of the Echigo oil-field are owned by an exclusively Japanese concern which seeks to enter into competition in the kerosene market with its powerfully-supported neighbour.

The oil-field of Yezo has also been leased, to all intents and purposes in its entirety, by the International Oil Company above referred to. When the Okura Company—a purely Japanese firm—sought to exploit the Yezo ground, it found itself forestalled. The existence of the crude is recognised in numerous districts scattered over seven provinces out of ten into which the island is divided. In one place the discovery of the oil-wells dates from a remote period, for their presence was known to the fishermen and sailors on the coast, who were accustomed to take refuge in stormy weather at the little harbour of Nukimi, in the Soya Strait, where the oil was found to trickle into the sea and still the waves. Soya Strait is that which is commonly known to Europeans as La Perouse Strait, Cape Soya being the most northerly point of Yezo, facing the Russian island of Saghalin.

Other places in Yezo where petroleum is known to exist are Nigori River, near Hakodate; Kayama, in Shiribeshi province; Itaihetsu, on a tributary of the river Urin (the output in this case is 800 gallons per diem); Kotami and Tsukisama villages, near the capital Sapporo; and near Abashiri, on the north-east coast, to which point a railway is projected, and where the wells are considered rich. Altogether the Yezo oil-fields are deemed to be fully as valuable as those of Echigo, though until quite lately their extent, and almost their existence, was unknown.

LACQUER AND BRONZE.

Though the ceramic industry now shows signs of restricted output, the reverse is the case with lacquer and bronze.

Lacquer ware was exported in—					Value. £
1897	...	...	...	...	76,740
1898	...	...	...	...	78,319
1899	...	...	...	...	100,926
1900	...	...	...	...	108,860

Bronze ware was exported in—					
1897	...	...	...	...	18,302
1898	...	...	...	...	20,734

These goods have from ancient times been the peculiar products of Japanese industry, and the arts have been applied to the manufacture of an almost infinite variety of trays, trinkets, and ornamental articles, which find their way to all the civilized countries of the globe.

MATCHES.

The astonishing success which has attended the Japanese in their manufacture of matches can best be appreciated when it is explained that until matches, as we know them, were taken to Japan by Europeans on the opening of the several treaty ports, to trade they had never been seen in that country. The old-fashioned match of Japan was simply a shaving of wood, dipped for half an inch or so in brimstone. It was held to a flame in order to light it. The Swedish 'tandstickor' caught the fancy of the Japanese people at once, and there was a great demand for these articles at all the *tôbušuya* or shops opened for the sale of foreign goods. Those were the days of the importation; these are the days of export, when Japan sends her own matches to all the neighbouring territories of the East, and undersells Sweden and every other match-producing country. In 1900—to compensate for the falling-off in the China trade—Japan sent matches in large quantities to Korea and to British India.

The wood used for match-sticks comes from the northern island of Yezo, where no fewer than fifty-seven factories are ceaselessly at work fashioning the tiny slips of wood to the requisite shape and size. As will be seen from the alphabetical list of exports, there

was a slight reduction in 1900, as compared with the preceding year, but the increase over 1893 is extraordinary. The actual export of matches in 1900 amounted to 19,317,994 *gross* boxes, but the output was considerably more—not less, indeed, than 21½ million *gross*—there being an appreciable local consumption in the larger towns.

Throughout the empire there are in all 265 factories, and the industry gives employment to fully 50,000 people, of whom about 37,000 are women and girls.

MUSHROOMS.

Under the Japanese name of *shiitake* large quantities of the edible fungus that grows at the foot of the oak-tree are exported every year to Hong Kong and China for the use of the Chinese, by whom these delicacies are much in request.

A small quantity is also sent to the United States, presumably to meet a Chinese demand there.

In Japan itself both the *matsudake*, which is a similar fungus, gathered at the root of the pine-tree, and the *shiitake*, are largely consumed. They are marketable only in the dried state, as a rule, and weigh lightly, the price of an avoirdupois pound being, roughly, 4s. 6d.

The distribution of this article of export was in :

To	1896.	1897.	1898.	1899.
	£	£	£	£
China - - -	22,757	17,915	15,830	18,878
United States - -	1,240	1,657	2,386	3,140
Hong Kong - - -	42,797	40,252	43,003	44,366
Other countries - -	907	1,129	1,971	2,496
Total - - -	67,701	60,953	63,190	68,880

RICE.

The rice that is deemed most suitable for exportation is grown in the island of Kiushiu and in the four provinces of Hondo, or Nippon, named respectively Nagato, Suwo, Bizen and Harima, which border the Inland Sea.

Rice is produced in the greatest abundance, however, in all the regions of Central and Southern Japan.

The exported rice is of two kinds—'uncleaned' and 'refined.' The refining is effected by pounding in special rice-cleaning machinery.

Much of the Japanese rice is sent to England and Hong Kong, a little to the United States, France, Germany and Australia.

But a trade has been opened up with many other countries, the list of foreign customers including, besides the six named above, British India, Korea, Russian Asia, Belgium, Austria, Holland, Turkey, Egypt and British America.

As mentioned elsewhere, Japan had comparatively little rice to spare in 1900; the total export amounted to 37,434 tons, as compared with 129,632 tons in 1899.

By way of illustrating the use to which Japan puts her surplus—or, rather, the quantity which she can spare for export, in *good* years—the actual figures are appended for the period 1896-99.

RICE, EXPORTED.

To	1896.	1897.	1898.	1899.
	£	£	£	£
Hong Kong - -	145,772	131,913	190,804	238,702
British India - -	12,607	1,998	12,389	15,554
Russian Asia - -	50,159	25,828	24,393	50,386
England - -	166,660	69,672	58,904	222,604
France - -	103,585	60,126	14,366	46,880
Germany - -	98,067	24,946	57,507	80,336
Austria - -	11,737	1,645	4,032	21,359
Holland - -	16,922	18,816	28,476	20,823
United States - -	71,735	69,893	69,733	157,140
Egypt - -	—	—	3,762	50,395
Australia - -	83,790	101,554	108,340	86,788
Other countries - -	34,070	107,724	19,306	37,226
Total - -	795,104	614,115	592,012	1,028,193

RAW SILK.

* The growth of the export trade is more noticeable in regard to manufactured than to raw silk. But even raw silk is in reality

a partly-manufactured commodity. Its importance as an article of export may be seen by the following figures :

					£
1893	...	...	...	...	2,816,741
1894	...	...	...	...	3,935,315
1895	...	...	...	...	4,786,625
1896	...	...	...	...	2,883,060
1897	...	...	...	...	5,563,046
1898	...	...	...	...	4,204,741
1899	...	...	...	...	6,393,246
1900	...	...	...	...	4,558,738

Since 1894 the United States have been the best customer for this best-paying product of the Japanese Empire ; France comes next, and England, Italy and Russia are in the third rank. The export of raw silk constitutes practically one-third of the total export trade of Japan. It was in the year 1870 that the European method of silk-spinning was introduced, and from that time forward the industry in Japan assumed an entirely new aspect. Nine years later there was adopted in the Gumma Prefecture, a district of which the busy town of Mayebashi is the centre, an 'improved re-reel machine,' the invention of a Japanese engineer, which accelerates production, and gives results that are in no way inferior, it is asserted, to the output of the European machine. The best proof of this is to be found in the fact that the silk spun by the Japanese improved re-reeler holds its own in market value with the best work of its competitors.

There are half a dozen grades of raw silk, known respectively as filatures, re-reels, hanks, *kakoda*, *ōsu* and *hamatsuki* ; and these, again, are classified into extra, best, good, medium, inferior, etc., the sub-division being carried still farther into first, second and third qualities of each class.

The chief producing districts are all situated in Central Japan.

In 1900, as the foregoing figures show, there was a considerable reduction in the value of the export, due to causes over which Japan had no control. Events in North China, and the resultant extremely unsettled state of affairs, acted as a brake upon her wheel of progress, and her rapidly expanding export trade suffered perceptibly all round. Moreover, the silk crop, upon which she principally relies to adjust the balance of trade with foreign countries, was a

disappointment. The losses caused by diminished production were aggravated by diminished demand. Orders for the crop of 1900 were so limited, especially from New York, that half of it was lying undisposed of in January, 1901. The accumulation of some 20,000 bales in Yokohama at the close of the year 1900 was increased by fully 15,000 bales up to June, 1901, and the effect upon selling prices could not be other than disastrous. But it was not the producer who was a sufferer by these untoward circumstances, as he was able to obtain excellent rates for his smaller output from the middlemen, who speculated on its scarcity. It was upon the exporter that the heavy burden fell of a declining trade, aggravated by unwieldy stocks. Until such time as the Eastern manufacturer is ready to buy on a larger scale than has been his habit of late (owing to South African and Chinese alarms) there is little hope of a return to the remarkable prosperity which the silk exporters of Japan enjoyed as recently as the year 1899.

RAW SILK EXPORTS.

Distribution to	1893.	1894.	1895.	1896.	1897.	1898.	1899.
	£	£	£	£	£	£	£
British America -	—	17,485	—	—	—	—	—
France -	1,493,999	1,380,151	1,661,036	1,175,533	2,009,404	1,414,037	1,918,378
Germany -	—	—	440	—	—	—	—
Great Britain -	104,320	20,188	26,429	22,778	20,092	31,581	30,494
Hong Kong -	—	—	247	2,801	—	—	—
Italy -	97,648	230,206	220,235	222,966	239,103	190,556	285,110
Russia -	—	1,054	4,470	7,024	13,585	33,912	31,791
Switzerland -	12,623	4,494	19,142	42,076	54,562	512	3,890
United States -	1,107,874	2,245,734	2,782,624	1,408,098	3,226,290	2,534,140	3,903,105
Other countries -	274	—	—	1,781	8	4	2

SILK PIECE-GOODS.

Fourth on the list in respect of value, the trade in silk tissues still holds, in spite of external politics, a high position among the commerce of the Japanese Empire, and when it is remembered that the demand for *habutaye*, crapes, and *kuiki*, is only of very recent origin, outside the limits of Japan itself, the rise in the export is truly phenomenal. Ten years ago the total value of *habutaye* for the twelve months scarcely exceeded 13,000, whereas in 1899 it amounted to £1,579,901.

The actual figures since 1893 are as under :

					Total Export of <i>Habutaye.</i>
					£
1893					355,360
1894					725,447
1895					835,448
1896					705,221
1897					953,067
1898	...	...	...	...	1,205,550
1899	...	...	...	...	1,579,901

This material is principally exported to France, whilst the *kaiki* finds its way mainly to the United States.

Kaiki—i.e., taffeta—produced in the province of Kai, has been exported since 1896 in the undermentioned proportions :

To	1896.	1897.	1898.	1899.
	£	£	£	£
Korea - - -	4,069	4,373	3,750	2,036
France - - -	—	430	1,485	1,425
United States - -	12,908	12,494	47,852	125,419
British America - -	2,629	177	2,857	9,656
Other countries - -	3,774	1,128	1,409	6,657
Total - - -	23,380	18,602	57,353	145,193

It will be seen that *habutaye* and *kaiki* together absorbed £1,725,094 of the total export of silk piece-goods for the year 1899, which, all told, amounted to £1,761,036. There was a small external trade in the *shuchin* and figured damask that are woven at Kiofo. *Habutaye* is mainly produced in Echizen, Kaga, Kotsuké, Shimotsuké, and Kai. The crapes are the output of Kotsuké, Tango, and Mino. *Kaiki*, as already shown, comes from Kai. These are all provinces of Central Japan, and Yokohama is ordinarily the port of shipment.

SILK HANDKERCHIEFS.

The United States, as Japan's best customer for these goods, takes from 35 to 40 per cent., France and Great Britain about the same quantity between them, and Hong Kong with 8 per cent.,

British India with 3 per cent., British America with $2\frac{1}{2}$ per cent., and Australia with 5 per cent., practically share the remainder.

The industry is carried on at the larger towns of Central Japan, and Yokohama ships the goods. In 1895 and 1896 the export was much larger than it has been since, until last year, when it again attained to a value of close upon half a million sterling.

No fewer than 1,123,656 dozens of handkerchiefs were exported at an average declared value of approximately 7s. 10d. per dozen.

The mulberry-tree, as furnishing food for the silkworm, is extensively cultivated throughout Japan. The areas allotted to it are in—

Central Nippon, approximately	...	...	474,000 acres
Northern Nippon	„	...	173,000 „
Western Nippon	„	...	66,000 „
Shikoku	„	...	15,500 „
Kiushiu	„	...	34,500 „
Yeso	„	...	3,350 „
			<hr/> 766,350

TEA.

The export of Japanese tea has declined since 1895, as the subjoined official figures sufficiently indicate. Its principal market was always to be found in North America—with the United States and Canada—the entire export, save 1 per cent., as recently as 1899, having been destined for those countries. But India and Ceylon teas have supplanted those of Japan even there. It is declared by experts that the quality of the Japanese leaf is deteriorating. Whether this is attributable to negligence in the cultivation, or in the picking of the leaves, is not very clear, but the lamentable fact for Japan remains that she is in no little danger of losing her best customer, the United States. That the Government of Tokio is aware of the danger is obvious, and the tea-growers already enjoy the benefit of a State subsidy. In a matter of commercial importance like this the Department of Agriculture does its utmost to check the decline; and it is understood that further steps have been taken to improve tea-growing.

The superficial area allotted in the Japanese islands to the cultivation of the tea shrub is, in—

Central Nippon, approximately	...	...	81,000 acres
Northern Nippon	"	...	4,500 "
Western Nippon	"	...	23,800 "
Shikoku	"	...	10,050 "
Kiushiu	"	...	22,950 "
Yeso	"	...	2½ "
			<hr/> 142,302½

In these figures are included spaces at the edges of plantations, fields, and gardens, which are largely devoted to the growth both of the tea-shrub and the mulberry-tree throughout Nippon. Yeso is too cold for tea, but the mulberry appears to thrive there.

The production of tea is an industry in Japan which has until lately never flagged, though the output has varied, within certain limits, year by year.

But at latest accounts the number of households, and of establishments in general, in which the manufacture was being carried on had fallen from—

774,060 in 1898 to 621,590 in 1899 ;

and the quantity of tea produced fell from

• 31,154 tons in 1898 to 27,838 in 1899.

These figures are exclusive of a considerable quantity of tea—amounting in 1898 to 10,815 tons—that is annually produced in Formosa.

The total value of the tea exported since 1895, with the distribution thereof, was as under :

To	1895.	1896.	1897.	1898.	1899.
	£	£	£	£	£
Great Britain -	3,728	64	1,024	2,755	1,811
United States -	709,299	495,024	626,228	635,072	632,680
Canada -	128,335	98,056	114,850	144,780	129,396
Other countries	3,834	7,239	2,091	3,641	6,074
Total -	845,196	600,386	744,193	786,248	769,961

Of the tea exported in 1900, the total of which was officially declared to have been 42,646,396 lb.—

New York	took 32 per cent.	= 75 per cent. for United States.
Chicago	„ 29 „	
San Francisco	„ 14 „	
Canada	„ 20 „	
Singapore	„ 5 „	

100

Apart from all considerations of export, it is to be noted that the total production of tea throughout Japan fell off alarmingly in 1899, as the subjoined figures amply show. There had not been so bad a year since 1894, and it is to be feared that the figures for 1900 and 1901 will not be more encouraging, as the weather proved fickle, at the most critical period in the growth of the young leaves, a little before the picking season began.

1899.				lb.
Tea grown in				
Central Nippon, or 'Hondo'	...	...	...	33,089,483
Northern „	„	„	...	1,820,534
Western „	„	„	...	13,468,446
Shikoku	...	...	...	6,363,900
Kiushiu	...	...	...	7,742,230
Total				<u>62,484,593</u>
In				lb.
1898 the total was	...	...	...	69,814,041
1897 „	„	„	...	70,133,106
1896 „	„	„	...	70,386,168
1895 „	„	„	...	72,025,906
1894 „	„	„	...	65,273,160

UMBRELLAS.

The manufacture of *Komori-Kasa*—i.e., bat's-wing umbrellas (the not altogether inappropriate term applied to umbrellas of the foreign pattern to distinguish them from the original oiled-paper and bamboo-ribbed products which are still so extensively used, and are withal so picturesque)—is an industry of quite recent growth. The demand for *Komori-Kasa* is mainly a Chinese demand, and is ascribable to the exceeding cheapness with which these serviceable

goods are turned out from the factories of Osaka (nine-tenths of the total export) and Tokio (one-tenth). The materials used are silk, muslin, and cotton-muslin, among which the last-named is in most request.

DISTRIBUTION OF EXPORT.

To	1896.	1897.	1898.	1899.
	£	£	£	£
China - - -	42,978	31,564	35,875	47,941
Hong Kong - -	22,686	14,192	16,315	28,476
British India - -	9,207	13,651	11,902	14,155
Korea - - -	816	1,479	2,659	2,651
Russian Asia - -	1,099	1,112	1,022	706
Other countries - -	572	706	944	1,422
Total - - -	77,358	62,704	68,717	95,351

The declared value of the 1,921,414 umbrellas sent abroad by Japan in various directions in 1900 was £87,892.

Roughly, this works out at about elevenpence each.

SUNDRIES.

There are still a few articles of export that deserve mention, if only for their uncommon character. Vegetable-wax and fish-oil, native-made paper, and certain drugs peculiar to the country, are among the more important. Japanese vegetable-wax is the special product of the West and South-West of the empire. The trees on which it grows flourish exceedingly in the island of Kiushiu. Hong Kong absorbs four-fifths of the quantity exported, Great Britain, the United States, Germany and British India ranking next as customers in the order named. Fish-oil, so-called, is of two kinds, raw and refined, and is extracted in great quantities from whale, cod, herring, sardine, shad, and other fish caught on the coasts of Yezo. The three producing districts are at Otaru, Hakodate and Akkeshi. Most of the oil goes to Germany, and latterly Belgium has been a good purchaser; Hong Kong has always bought largely, and in 1895 and 1896 France imported this oil somewhat extensively; England was a large buyer in 1897 and 1899. The export of ginseng, a drug used by the Chinese, is considerable, having a value in 1898 of £42,000.

STRAW-PLAIT.

In Japan they not only manufacture the straw-plait, but shape it into straw hats of various patterns, and a glance at the subjoined figures will show how formidable a rival Luton has in Osaka, where great quantities of plait are annually produced, much of which is exported to foreign countries.

The value of the export since 1893 has been :

					£
1893	...	...	...	...	37,834
1894	...	...	...	...	74,339
1895	...	...	...	...	138,764
1896	...	...	...	...	223,435
1897	...	...	...	...	318,191
1898	...	...	...	...	240,400
1899	...	...	...	...	282,789
1900	...	...	...	...	410,901

The sale was checked temporarily in 1898 by a reduction in the demand from Hong Kong, but by 1900 the trade had recovered itself, and had almost made up lost ground.

England is the largest customer, whilst the United States of America and Hong Kong come next in order. France is also a considerable buyer. The average declared value of 100 bundles of straw-plait sent to England in 1898 was £4,

Two years later the total export was valued at £410,901, and the quantity sent away from Japan was 8,802,039 bundles, the average for 100 bundles thus being about £4 13s. 6d.

Of this export England took about 60 per cent., the United States 20 per cent., Hong Kong 10 per cent., and France 4 per cent.

In other words, Luton's Japanese competitor sent to the English market, in defiance of Luton, straw-plait to the value of, roughly, a quarter of a million sterling.

The principal seat of the industry in Japan is at Osaka, but Okayama, in Bizen province, 110 miles west of Kobé, is likewise a large producer of straw-plait.

Baskets of all kinds, tea-caddies, and an almost endless variety of articles are made from the same material.

EXPORTS.

	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Antimony -	£ 18,385	£ 25,426	£ 28,993	£ 28,380	£ 26,758	£ 21,659	£ 21,082	£ 10,995
" wares	7,567	7,236	13,027	10,401	6,333	5,113		
Awabi (mother - of- pearl) -	-	44,557	39,640	40,804	39,663	46,683		
Bamboos -	-	18,896	28,313	32,499	37,751	51,246	28,847.	35,489
Bamboo wares -	-	29,824	41,709	40,334	35,567	34,693	42,610	61,777
Bêche de Mer (Irako)	-	29,432	31,690	31,952	29,662	32,915	37,004	28,517
Beer and other liquors	1,379	6,259	13,271	9,214	6,562	15,289		
Brass wire	5,202	8,585	7,938	10,861	7,241	11,205		
Bronze ware	19,050	18,368	22,929	18,031	18,302	20,734		
Camphor -	130,866	102,395	152,683	111,919	131,829	117,457	179,105	313,467
Carpets -	39,198	113,407	163,590	115,217	97,387	85,075	73,615	88,464
Charcoal -	7,172	7,886	10,019	10,955	12,502	9,891		
Cigarettes	2,985	5,687	11,576	8,193	23,161	13,344	30,068	73,046
Coal -	264,708	391,726	442,640	794,854	745,726	1,224,062	1,548,080	2,044,943
Copper, ingot -	203,382	179,943	134,058	242,311	107,594	116,058	1,162,054	1,299,105
" slab -	93,180	115,586	169,337	159,444	201,794	710,649		
" manufactured	160,360	194,545	212,370	246,103	268,080	257,384		
" ware -	7,198	13,497	10,134	13,507	22,323	25,738		
Cotton, piece-goods -	24,142	57,171	132,751	179,822	228,062	101,452	320,698	522,833
" yarn -	5,917	95,553	103,447	402,942	1,349,019	2,011,658	2,911,563	2,101,820
" " crapes (chijimi)	58,697	106,757	58,590	40,073	37,410	31,592		

EXPORTS—continued.

	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Cotton, flannels -	28,115	22,191	40,052	42,788	23,174	35,083	78,497	61,458
" " ginned -	14,079	9,849	19,768	11,085	13,283	8,409		
" " raw -	7,561	11,915	17,192	15,456	23,438	21,829	21,427	33,067
" " underwear -	3,227	13,354	9,699	12,503	7,633	13,857	23,530	24,056
Cuttlefish -	142,678	116,245	99,603	115,114	141,364	126,825	139,044	118,293
Fans -	42,415	31,941	39,951	69,389	88,560	49,923	54,326	93,005
Fish-oil -	53,030	66,980	52,327	33,605	61,847	39,172	56,244	92,571
Flour -	3,193	14,145	16,184	13,885	15,420	18,775		
Furniture -	5,302	10,221	10,349	8,093	9,273	13,169		
Furs -	12,324	11,139	26,290	29,256	33,659	14,556		
Gall-nuts -	5,545	5,648	22,949	15,316	9,827	12,223		
Ginseng -	28,971	49,979	37,364	43,526	48,422	42,383	48,680	41,616
Glass ware -	20,914	25,895	34,647	44,583	38,956	10,522	22,079	23,509
Hats and caps -	3,824	4,981	10,207	10,537	10,483	9,466		
Iron " -	4,255	6,244	9,587	10,548	17,803	20,152		
Ivory " -	8,465	9,828	10,659	8,982	10,767	9,295		
Jinrikishas -	3,866	6,834	10,469	10,266	8,682	9,374		
Kanten (<i>colle végétale</i>) -	68,214	49,562	44,927	59,581	59,105	61,133	68,848	98,441
Lacquered ware -	70,899	79,753	108,321	94,873	76,740	78,319	100,926	108,860
Lily bulbs -	5,542	6,822	8,170	10,228	15,017	12,882		
Manganese -	11,288	19,881	19,659	27,443	20,531	15,633	15,587	22,907
Matches -	353,777	379,563	467,281	498,626	564,199	627,394	601,339	588,088
Mats -	172,338	196,549	346,137	305,675	323,273	393,845	379,494	337,900

EXPORTS—continued.

	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Menthol crystals -	£ 5,486	£ 14,310	£ 16,741	£ 31,865	£ 12,475	£ 10,620	£ 70,317	£ 70,076
Mushrooms -	56,885	57,951	52,294	67,702	60,955	63,192		
Paper -	33,792	33,829	45,776	53,032	72,507	93,043		
" wares -	20,126	30,379	50,693	43,009	32,015	25,222		
Peppermint oil -	12,168	24,277	11,287	23,427	5,595	5,204		
Porcelain and earthen-ware -	157,719	148,485	195,506	197,485	181,906	199,078	222,678	252,340
Rags -	23,676	28,491	5,703	7,483	12,770	20,751		
Rape-seed oil -	2,003	1,873	4,878	4,103	6,646	3,979		
Rice -	500,115	559,315	720,734	795,108	614,121	592,018	1,049,622	365,108
Salmon and cod, dried, etc. -	8,597	6,612	6,415	4,011	5,657	8,261		
Salt -	8,621	6,825	9,746	13,235	30,081	21,578		
Screens -	35,248	28,834	36,601	44,666	35,988	34,608	32,865	41,654
Seaweed -	76,657	46,723	51,427	60,958	83,146	54,935	} 96,579	90,213
" cut -	17,284	13,979	11,601	12,265	10,156	16,193		
Sharks' fins -	10,171	10,221	9,588	11,078	13,100	13,411		
Shippo ware -	7,567	7,236	13,027	13,401	13,053	13,691		
Shrimps -	20,356	17,178	22,282	20,997	21,549	27,054		
Silk, raw -	2,816,741	3,935,315	4,786,625	2,883,060	5,563,046	4,204,741	6,393,246	4,558,738
" habutaye -	355,360	725,447	835,448	705,221	953,067	1,205,550	1,579,901	1,869,625*
" handkerchiefs -	339,964	362,812	533,995	461,772	339,014	355,511	353,368	440,852
" piece-goods -	52,138	117,552	164,335	36,416	30,865	71,842	†	†

* Includes other piece-goods.

† See habutaye.

EXPORTS—continued.

	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Silk, waste	120,118	157,638	151,546	151,625	183,244	157,301	£ 415,896	£ 424,801
" <i>noshi</i> -	158,159	163,221	134,725	124,781	118,753	108,291		
" manufactures	45,447	92,589	89,401	56,486	45,003	47,436		
" cocoons, pierced	26,424	21,588	17,650	4,980	12,700	1,820		
" and cotton mix-								
tures -	7,159	5,903	6,299	2,229	1,357	1,272		
" floss and floss								
waste	11,503	9,978	1,430	2,005	1,500	6,559		
Soap, toilet	6,212	7,520	9,821	9,040	8,850	9,697		
Soy -	4,909	6,767	7,488	8,813	12,096	15,936		
Straw-plait	37,834	74,339	138,764	223,435	318,191	240,400	282,789	410,901
Sulphur	23,833	24,454	29,613	30,858	32,134	47,901	58,685	71,283
Tea -	742,037	756,919	845,196	600,383	744,193	786,248	867,584	922,406
" dust -	19,559	24,801	30,801	23,700	28,704	24,395	91,632	108,547
Timber -	21,211	27,582	26,153	44,732	37,607	46,250		
Tobacco, leaf	6,576	25,967	21,661	15,158	9,862	3,532		
Umbrellas	58,927	74,606	73,520	77,362	62,705	68,719	97,311	87,892
Vegetable-wax	38,376	56,213	33,484	37,170	73,057	60,976	65,559	57,313
Wheat -	4,557	5,593	9,063	1,178	550	355		
Wine (<i>saké</i>)	5,535	18,610	41,533	26,819	25,866	24,491	37,347	56,126
Wooden ware	26,362	28,075	39,835	39,685	70,978	41,294		

SECTION V.

COMMUNICATIONS.

IT was recognised at the very beginning of the Meiji era, A.D. 1867, that the development of Japan's mineral and other resources would largely depend for success upon the establishment of adequate means of communication around her coasts and between her inland towns and cities. Her statesmen were thus early induced to concentrate their attention upon the provision of railways, and lines of steamships and telegraphs, as being altogether indispensable; and the proceeds of the first foreign loan contracted by the Japanese Government were devoted almost exclusively to the realization of these and kindred projects.

Railways, more particularly, were deemed to be requisite, but as the building of even the short line skirting the western shore of the Gulf of Tokio was certain to entail much labour, it was felt that tangible evidence of the work of the new administration could best be presented at the beginning in the form of a serviceable electric telegraph. A scheme was immediately drawn up, therefore, in the modernized Department of Public Works, for the extension of the system to all the principal centres of trade and local government, starting with the central and western provinces, so as to place them in direct touch with headquarters.

Thus it came about that, whilst the first section of the State Railway, eighteen miles in length, joining *Yokohama* with *Tokio*, begun in 1869, was not ready for opening by the Emperor until 1872, the line of telegraph, 376 miles long, connecting *Tokio* with *Kobe*, and following the 'Tokaïdo,' or Eastern Sea high-road, commenced at the end of 1871, was ready for use by October of the following year, and within the next six months had been carried southward to *Nagasaki*, a distance from the capital by the route then taken of not less than 900 English miles.

RAILWAYS.

The year 1873 saw the opening of that section of the railway system which serves to unite *Kobé* with *Osaka* and *Kioto*. These three large cities of mid-Japan are to-day distinguished as being respectively the principal emporium of foreign trade, the chief manufacturing centre, and the home for many centuries of the highest forms of Japanese art. But from that year the Government enterprise seemed to languish, and it was only when the Railway Bureau exhibited a willingness to afford facilities for the prosecution of further undertakings by means of private—but always native—capital that a renewal of activity became noticeable. This was in 1880, and various companies were formed in the course of that year and the next to extend the system of railways to all the more populous provinces, and to carry forward the lines not only to the extreme northerly limits of the main island, but into the *Hokkaido*, which on the older maps is commonly shown as *Yeso* or *Jesso*.

The impetus then given to the spread of railways, though very real, was not abundantly apparent until a still later date. Construction in so hilly a country as Japan was necessarily the work of years, and up to the end of 1882 Japan could only claim to possess some 60 English miles of railway actually at work; but by the end of the year 1887 there were 657 miles in operation, and as the accompanying tables show, the annual increase thenceforward in mileage completed, more particularly during the ensuing three or four years, was remarkably rapid. By September, 1893, there were 1,879 miles of line in full work, with no fewer than 346 stations. In the spring of 1900 the figures were:

				Miles.
State railways	...	...	...	893
Private railways	...	...	...	2,806
				<hr/>
				3,699

showing an addition of 218 miles during the preceding twelve months.

JAPANESE RAILWAYS.

Name.	Capital (£1=50).	Length Open (Miles).	Under Construction.	Cost of Construction to date.	Net Profits 1899-1900.	Proportion of Working Ex- penses to Actual Receipts.	Loss.
STATE RAILWAYS	£	893	1,246	£ 8,815,350	£ 712,232	48.08	£
COMPANIES:							
Nippon	6,600,000	857	3½	4,506,830	444,155	47.17	—
Iyo	30,000	16½	—	18,925	3,291	51.39	—
Sanyo	2,400,000	280	45	2,066,325	134,365	47.90	—
Sanuki	130,000	27	—	130,000	14,786	32.66	—
Kwansai	1,490,000	148	14	1,326,460	66,156	57.18	—
Osaka	345,000	45½	—	334,785	39,619	38.81	—
Kobe	300,000	26½	—	179,200	31,989	38.46	—
Kinshu	4,075,000	330	89	2,850,900	177,864	59.68	—
Hokkaido Tanko	800,000	207	—	749,292	74,532	55.48	—
Sobu	360,000	72	—	298,782	43,835	39.69	—
Sangu	165,000	26	—	158,636	19,164	35.71	—
Hoshu	680,000	52½	17½	505,965	49,509	35.84	—
Kawagoye	36,000	18	—	- 34,083	4,210	54.45	—
One	20,000	13	—	17,438	1,301	65.45	—
Nara	235,000	38	—	224,733	13,160	52.56	—
Sano	15,000	9½	—	13,134	1,556	61.54	—
Bantan	310,000	30½	40	154,369	5,418	56.23	—
Narwa	78,000	14½	—	77,829	4,655	49.90	—
Boso	324,500	35½	36	184,474	7,540	47.14	—
Nanyo	18,000	6½	—	17,421	1,824	49.01	—
Dogo	6,000	3	—	5,993	539	72.09	—
Narita	385,000	24½	64½	112,919	7,972	42.93	—
Kioto	510,000	22	81½	361,134	6,923	42.84	—
Hankwaku	600,000	68½	—	586,476	13,098	64.27	—
Ota	68,000	12	—	58,947	—	186.88	3,100

JAPANESE RAILWAYS—continued.

Name.	Capital (£1 = \$).	Length Open (Miles).	Under Construction.	Cost of Construction to date.	Net Profits 1899-1900.	Proportion of Working Ex- penses to Actual Receipts.	Loss.
COMPANIES:	£			£	£		£
Chinetsu -	70,000	18½	4½	53,413	2,595	60·90	—
Hoketsu -	370,000	84½	14½	595,569	11,834	76·30	—
Jioya -	52,000	21	—	52,000	868	85·77	—
Tyokawa -	100,000	13½	5	78,929	2,441	69·60	—
Kayo -	70,000	6	5	—	—	184·43	220
Nankai -	500,000	38½	5½	371,672	33,143	41·09	—
Koya -	150,000	10½	17½	136,235	1,971	60·59	—
Bisai -	60,000	15½	—	64,214	1,956	52·13	—
Nishinari -	165,000	3½	—	164,350	3,636	44·35	—
Kiwa -	117,800	12½	18½	114,249	2,623	55·69	—
Nanao -	105,000	32½	1½	109,625	—	102·31	215
Dzuso -	40,000	10½	—	49,916	66	97·95	—
Omi -	100,000	11½	15½	96,861	3,163	45·68	—
Ganetsu -	600,000	39	73½	221,554	9,319	32·44	—
Karatsu-Kogio -	216,000	18½	9	210,712	—	156·59	4,250
Chingoku -	500,000	34½	63	303,725	8,028	66·87	—
Tokushima -	80,000	18	3½	78,932	3,617	55·51	—
Kanan -	30,000	6	4½	23,677	166	95·41	—
Tobu -	265,000	24½	24½	144,311	8,780	31·59	—
COMPANIES FORMED but lines not opened -	1,210,000	—	307½	—	—	—	—
Totals to March 31, 1900 -	24,705,300	3,699½	2,207	26,659,844	—	—	—
Totals to March 30, 1895 -	12,113,800	2,290½	1,363	11,649,225	—	—	—
Totals to September 30, 1893 -	7,312,300	1,879	266	5,449,300	—	—	—

The private lines were largely owned by four companies, viz. :

			Miles.
The Nippon Railway	...	...	857
The Kiushiu „	...	...	330
The Sanyo „	...	...	280
The Hokkaido Tanko (Collieries) Railway			207
			<hr/> 1,674

This healthy expansion of the system of railways, though it suffered a slight check during 1900 owing to scarcity of capital, is again proceeding uninterruptedly, and the proportion of expenditure to income, as will be seen on reference to the tables, affords evidence of general prosperity and efficient management.

With the removal of the obstacles to foreign ownership of land or shares, which it is the aim of an influential Parliamentary party to effect—an endeavour, moreover, which is evidently favoured by the Government—the probabilities are that a marvellous stimulus will be given to railway enterprise. Japan, in other words, has done well, but with more capital she might have done better, and the chances are that foreign capital will soon provide her with the facilities that she needs for increasing the output of raw material from her mines and perfecting her arrangements for the transport of produce to the coast. It will be observed that though 3,699 miles of railways were being worked in March, 1900, there were 2,207 miles more in course of construction. In other words, only 60 per cent. of the entire scheme of railway extension as planned by the State or by private companies, had yet been realized; and what is still more noteworthy, the incomplete mileage by no means constituted the measure of Japan's further needs in this direction, but only the extent to which she might be able to proceed with her own unaided capital. Probably the limits of profitable railway extension will not be reached with less than double or treble the mileage that has hitherto, from force of circumstances, formed the Japanese railway builder's horizon.

It will be observed that in four instances the working expenses of the lines exceeded the actual receipts, and that in three of these cases the percentage of excess was considerable, though the sums involved were not very large. The loss for the year 1899-1900, to be more precise, was upon the Ota Railway about £3,100; on the

Kayo line about £220; on the Nanao about £215, and on the Karatsu-Kogio a trifle over £4,250.

But in a majority of the Japanese railway undertakings the expenditure was much below the income, for upon the lines owned by forty-four companies those cases in which the percentage of expenditure fell below 35 per cent. of the receipts numbered 3

Above 35, but under 40 per cent.	...	...	5
Between 40 and 45 per cent.	...	...	4
45 „ 50 „	...	...	6
50 „ 55 „	...	...	4
55 „ 60 „	...	...	6
60 „ 65 „	...	...	4
65 „ 70 „	...	...	3
70 „ 75 „	...	...	1
75 „ 80 „	...	...	1
Over 85 „	...	...	1
„ 95 „	...	...	2

whilst those actually worked at a loss numbered 4

The railways under the direct administration of the State were efficiently managed on an expenditure of less than one-half the revenue derived therefrom, the actual cost of working amounting to no more than 48·08 per cent. of the total receipts.

The longest lines, apart from those which are Government property, are the

	Miles.	Expenditure.
Nippon ...	557	47 per cent. of income.
Kiushiu ...	330	59 „ „
Sanyo ...	280	48 „ „
Hokkaido ...	207	55½ „ „
Kwansai ...	148	57 „ „
Hokuetsu ...	84	76 „ „
Sobu ...	72	39½ „ „
Hankwaku ...	68	64 „ „

These, with the exception of the Hokuetsu line, all show a fair margin of profit. Precisely one-half of the railway companies of Japan contrive, in fact, to carry on their business at an expenditure of never more than 55 per cent. of their revenues, and in most cases on very much less.

The Gan-Etsu Railway in particular deserves notice for the economy practised in its administration, whereby $43\frac{1}{2}$ miles of line, with twelve stations, were efficiently served, with a net profit on the year's working of £9,319, the capital of the company being £600,000. The actual expenditure for twelve months was £4,475, and the actual receipts £13,794. The service was maintained with the aid of five locomotives, eighteen passenger carriages, and sixty-one waggons, the number of passengers carried being 216,585, with over 35,000 tons of merchandise. The train mileage actually run was a trifle over 66,000 English miles, or, roughly, 180 miles per diem. Obviously this line of railway is not yet overburdened with traffic, as it seems to be adequately equipped with two trains each way per day; but it serves a mountainous district which, prior to the advent of the locomotive, boasted no more efficient means of cross-country transport than the packhorse or the palanquin, and though anything approaching an extensive trade has yet to be developed, and may be far in the future, the ever-increasing facilities offered should assuredly give rise to an appreciable augmentation in the commerce of the region.

Possibly military reasons have in more than one case dictated railway construction in Japan. In such cases official encouragement has been given. It would otherwise be difficult to account for the over-sanguine expectations that seem to have been formed by companies which have sunk their capital in efforts to link up sparsely-inhabited districts to the main system.

The railway chain of Japan, so to term it, is composed of many links, but it is practically continuous from Yatsushiro, in the island of Kiushiu, in about latitude $32^{\circ} 35'$, to Aomori, on the Tsugaru Straits, which divide the islands of Nippon and Yeso, in latitude 41° , a total distance of not less than 1,250 miles, the only break being at Shimonoseki Straits, where there is a steam ferry to convey the passengers across in half an hour.

In the *Hokkaido*—i.e., Yeso—which prior to the Meiji era was almost entirely uncultivated and wholly undeveloped, great use has been made of railways for bringing to the coast the mineral wealth that the island was discovered to possess. Lack of capital alone prevents the extension of the existing lines to other known coal-bearing areas, but the Tanko Tetsudo Kaisha—in other words, the Mining and Railway Company—of Yeso, is on the point of doubling

its capital, and it is reported that the rules are to be so altered as to admit of foreign investors holding shares in accordance with the new laws. The Tanko Company paid, in 1900, a dividend of $11\frac{1}{2}$ per cent., and the £5 shares, which at one time stood at £9 15s., are still quoted as high as £7 11s.

There were in Yezo about 328 miles of railway in operation at the end of 1900, 207 of which belonged to the Mining Company named. A railway which was projected by the Kansu Company, and intended to join Hakodate with the flourishing port of Otaru, on the north coast, had then made but little progress for financial reasons. The route, skirting the shores of Volcano Bay, which it is intended that this line of railway shall follow, is one that must entail much tunnelling, particularly near Rebugé.

SHIPPING.

Second only to the railways in point of importance as a means of fostering the commercial growth of the nation came the development of steam navigation between the ports open to foreign trade and those thriving towns situated upon the coasts of Japan, to which freedom of access by foreigners was at that time barred by treaty. Obviously it was impossible to depend upon antiquated 'junks' for the collection and distribution to the interior of the merchandise that began to arrive in bulk at the five 'open ports' of Yokohama, Kobé, Nagasaki, Hakodate and Niigata. The establishment of a system of railways, State-aided or independent, was a scheme demanding decades for its consummation. Meanwhile it seemed feasible by the employment of small steamers to encourage trade between Osaka and places in the 'Inland Sea,' or upon the west coast, not served by the foreign mail-boats. Such prosperous concerns as the 'Three Diamonds' Steamship Company, the National Steamship Line, and the Tosa Navigation Society, sprang into existence as if by magic the very moment that a lucrative business in this direction became perceptible, and they were the nuclei of the huge mercantile undertakings that now control the vast over-sea carrying trade of Japan, and conduct nearly the whole of her maritime commerce with Europe and America. The Mitsu Bishi (Three Diamonds) Company owed its inception mainly to the energy of Mr. (afterwards Baron) Iwasaki Yanosuké, and the Tosa Com-

pany, which originally traded between Osaka and the port of Kochi in Tosa province (Shikoku Island), was created by the enterprising factor of the Tosa estate, on behalf of his prince, who was in pre-Restoration days the *daimiyo*.

The Mitsu Bishi Company did not confine its operations to the Japanese coasts, but began in 1874 to run mail-boats to and from Shanghai, and the service has ever since been maintained by it and its successor, the Japanese Mail-boat Company, of which the native title is *Nippon Yusen Kaisha*. At first there was keen competition between the Mitsu Bishi vessels and those of the Pacific Mail Steamship Company which, in addition to its main service between San Francisco, Yokohama, and Hong Kong, ran a branch line from Yokohama to Shanghai. But eventually the Mitsu Bishi Company bought the four ships of its rival and renamed them, and the Stars and Stripes ceased for the time to make a regular appearance weekly on the waters of the 'Inland Sea.'

The Nippon Yusen Kaisha now maintains the following services, and it is well supported by the travelling public.

I. A regular fortnightly mail between Yokohama, London and Antwerp, calling on the way at Kobé, Shimonoseki (occasionally), Hong Kong, Singapore, Penang, Colombo, Port Said and Marseilles, when westward bound, but missing Marseilles and Penang on the eastward voyage. Twelve new twin-screw steamers of over 6,000 tons each are employed on this line. Connection is made at either Hong Kong or Kobé with the principal ports of China, Korea, Australia, etc.

II. A mail-boat every three weeks to Bombay, calling at Kobé, Shimonoseki, Hong Kong, Singapore and Colombo. On the return voyage the vessel sometimes calls at Tuticorin in the Gulf of Manaar, and misses Colombo and Shimonoseki. The ships engaged on this route are between 3,000 and 4,000 tons.

III. A monthly service by vessels of 3,800 tons between Yokohama and Melbourne, via Kobé, Nagasaki, Hong Kong, Manila, Thursday Island, Townsville, Brisbane and Sydney, touching also at Shimonoseki when outward bound from Japan.

IV. A regular four-weekly connection is maintained with Canada and the United States, the termini of the line being Seattle and Hong Kong, and the vessels, touching at Kobé, Yokohama and Victoria (Vancouver) *en route*, meet the Great Northern system at

Seattle. Three steamers of between 4,000 and 5,000 tons perform this service.

V. A weekly service is kept up by vessels of over 2,500 tons between Yokohama and Shanghai, calling at Kobé, Shimonoseki and Nagasaki, the whole journey occupying from six to seven days.

VI. Also between Vladivostock and Hong Kong, the steamers calling, when northward bound from Hong Kong, at Swatow, Amoy, Shanghai, Wei-hai-Wei, Chefoo, Jinsen (Chemulpo) and Nagasaki, on their way to the Russian port; and at Gensan, Fusan, Nagasaki, Wei-hai-Wei, Chefoo, Shanghai, Foochow, Amoy and Swatow, when on their voyage southward, the round trip requiring fifty days for its accomplishment. In the depth of winter, when the frozen state of the harbour of Vladivostock renders navigation thitherward impracticable, the ships go no farther north on that route than Gensan.

VII. A separate service is maintained with Vladivostock from Kobé by two steamers, which call at Shimonoseki, Nagasaki, Fusan, and Gensan *en route*.

VIII. A steamer leaves Kobé every four weeks bound for Newchwang, calling at Shimonoseki, Nagasaki, the island of Tsushima, Fusan, Mokpo, Chemulpo, Chefoo and Taku (except in mid-winter, when she goes no farther than Chefoo). Passengers for Tientsin land at Taku.

IX. There is likewise a direct monthly service between Kobé and Tientsin (or Tongku), calling at the same ports, with the exception of Tsushima, as the last-named (VIII.); but when the river Peiho is frozen over the vessel goes no farther than Korea.

X. The mail contract with the Japanese Government farther obliges the company to send a steamer every three weeks from Kobé to Chinnampo in Korea; and this vessel likewise calls at Shimonoseki, Fusan and Chemulpo, both in going and returning.

It will be admitted that the Nippon Yusen Kaisha is an institution that deserves well of its country, having regard to the extent and character of the service it renders in the spread and preservation of Japan's national lines of communication. But this highly successful and creditable undertaking is not the only one of the kind to which the Japanese may point with pride.

The To-Yo Kisen Kaisha have a line of 6,000-ton steamers

running regularly between Hong Kong and San Francisco every four weeks, calling on the way at Shanghai, Nagasaki, Kobé, Yokohama and Honolulu. At Hong Kong this company is in touch with the principal European services to Australia, India and the Occident.

Still another Japanese company, the Osaka Shosen Kaisha, runs steamers regularly to and from Hong Kong, trading to Formosa, via Swatow and Amoy, and performs occasional services between the ports of Japan and those of Korea and China.

The Nippon Yusen Kaisha—i.e., Japan Mail-Boat Company—, pays 12 per cent. per annum, and owns seventy steamers, exceeding in the aggregate 210,000 tons. There are several new ships in course of construction. The *Kaga Maru* (6,000 tons), launched at Nagasaki on January 26, 1901, was the third vessel of that tonnage built entirely at the Japanese dockyard there. The *Kumano Maru* (3,800 tons), built to the company's order on the Clyde, has just taken her place in the regular service between Japan and Australia. She is an embodiment of the most modern ideas in commercial shipbuilding, and aptly illustrates the efforts which Japanese owners are putting forth to secure a class of sea-going vessel which shall combine cargo capacity with moderately high speed, together with efficiency and comfort in relation to passenger accommodation on voyages that include the torrid zone.

The Nippon Yusen Kaisha has the distinction of ranking tenth among the largest steamship owners of the world in the order of total gross tonnage. Among the seventy vessels that the company owns, there are five with a sustained sea-speed of over 15 knots, three of over 14 knots, twenty-three of over 13 knots, and seven of 12 knots. The largest merchant steamer that Japan owns—viz., the *Awa Maru*, of 6,309 tons—belongs to the same company, and was, moreover, built at the Nagasaki Shipbuilding Yard.

The Osaka Sho-sen* Kabushiki Kaisha's fleet consists of :

2 steamers of 3,300 tons.	9 steamers of 1,500–2,000 tons.
2 " 2,790 "	3 " 1,000–1,500 "
1 " 2,490 "	13 " 500–1,000 "
2 " 2,240 "	44 " " below 500 "

Steamers and sailing craft, under the Japanese flag, frequently undertake voyages to the islands of Oceania, and carry passengers, mails and merchandise, with the result that the rising sun ensign is a familiar object in Pacific waters south as well as north of the equator.

The leading Japanese steamship lines are all in a flourishing condition, as is shown by the satisfactory reports presented to their shareholders and the dividends which have been declared.

The Austrian-Lloyd Company runs a steamer monthly to Japan from Trieste, and the Messageries Maritimes have a steamer to and from Yokohama and Marseilles every four weeks by way of Bombay, and another every four weeks via Colombo.

The Ocean Steamship Company maintains a weekly service of cargo steamers from Liverpool to Japan, calling at the Straits Settlements and China ports.

The steamers belonging to the Canadian Pacific Railway Company leave Vancouver every third or fourth Monday for Yokohama, Kobe and Nagasaki, continuing the voyage thence to Shanghai and Hong Kong. In returning from Hong Kong, and after visiting Shanghai they call at Nagasaki, Kobe, and Yokohama in the order named. The service was established in 1891, and the ships are named *Empress of India*, *Empress of China*, and *Empress of Japan*. These vessels are all of 5,905 tons, capable of maintaining an average speed of 18 knots, and are widely known for the comfort afforded to passengers by this route.

The *Empress of Japan* in 1887 steamed from Vancouver to Yokohama in ten days and ten hours, and the whole voyage to Hong Kong occupied seventeen days and sixteen minutes. It is possible to travel from Montreal to Vancouver by rail in 102 hours, or 98 hours the opposite way, and thus Japan is by the Canadian-Pacific route brought within three weeks of Great Britain. The average time taken by the mails, however, is between twenty-four and twenty-five days.

The North German Lloyd Company has since 1885 been running steamers to Japan, but within the last three or four years its service has been extended and improved; so much so that we have it on the authority of the British Consular Report for Japan that passengers nowadays choose the ships of this line in preference to any others for the voyage to Europe. 'The Nord-Deutscher Lloyd

continues to own,' it is declared, 'the most commodious and best-appointed vessels on this [to Europe via India] route.'

This Company's steamships trading to Japan are :

	Tons.		Tons.
<i>Prinzess Irene</i> ...	10,881	<i>Kiautschou</i> ...	10,643
<i>Prinz Heinrich</i> ...	6,263	<i>Bayern</i> ...	5,034
<i>Preussen</i> ...	5,295	<i>Stuttgart</i> ...	5,048
<i>Hamburg</i> ...	10,600	<i>König Albert</i> ...	10,643
<i>Sachsen</i> ...	5,026		

They leave Southampton every alternate Monday, and complete the voyage to Japan in forty-two days, calling at Nagasaki, and passing through the Inland Sea to Kobé, and thence to Yokohama.

Passengers wishing to travel to England from Japan by a British mail line must now proceed first to Shanghai or Hong Kong, either by the 'intermediate' vessels of the Peninsular and Oriental Steam Navigation Company, or by vessels belonging to some other line. The ships which the P. and O. Company used to run between Hong Kong and Yokohama, carrying passengers and cargo, and at times mails, were sold to a Japanese company, and are now running between Kobé and Australia.

The following is believed to be a complete list of the various steamship lines trading to Japan, including the Japanese-owned lines already alluded to :

Apcar Line.	Navigazione Generale Italiana.
Austrian Lloyds Co.	New York Line.
'Ben' Line.	Nippon Yusen Kaisha.
British India S.N. Co., Ltd.	Nord-Deutscher Lloyds.
California and Oriental S.S. Co.	Northern Pacific S.S. Co.
Canadian Pacific S.S. Co.	Ocean S.S. Co.
China and Manila S.S. Co., Ltd.	Occidental and Oriental S.S. Co.
China Mutual S.N. Co.	Oregon Railway and Navigation Co.
China Navigation Co., Ltd.	Osaka Sho-Sen Kaisha.
Compagnie des Messageries Maritimes.	Pacific Mail S.S. Co.
Compania Trans-Atlantica, London	P. and O. S.N. Co.
Compania Maritima, Manila.	Scottish Oriental S.S. Co., Ltd.
Douglas S.S. Co., Ltd.	'Shell' Line.
Eastern and Australian S.S. Co., Ltd.	'Strath' Line.
'Gibb' Line (Australian).	Toyo Kisen Kaisha.
'Glen' Line.	'Union' Line.
'Guion' Line.	Russian Steam Navigation in the East.
Hamburg-America Line.	Russian Volunteer Fleet.
Indo-China S.N. Co., Ltd.	'Warrack' Line.
'Milburn' Line.	United States and China-Japan S.S.
'Mogul' Line.	Line.
Natal Line.	

TONNAGE OF STEAMSHIPS ENTERING OR LEAVING THE
PORTS OF JAPAN, ACCORDING TO FLAG, ETC.

In the accompanying tables sufficient data will be found to admit of comparison between the present shipping trade of the ports and that which they enjoyed five or six years ago. It will be seen that Japanese owned craft annually obtain an increased share of the total freights, inward and outward, and that comparatively few of the harbours open to foreign commerce are frequented by steamers flying foreign flags. It is possible that in time a knowledge of the facilities offered will spread, and that the tendency to ship or land cargoes at ports not hitherto recognised as available and profitable centres of trade will grow. It should be feasible to tap large areas in this way which have so far had no outlet by sea, and, in the absence of branch railway communication with the trunk lines, are still compelled to rely upon road transport, which is necessarily slow and costly, for the means of bringing produce to market. The writer personally witnessed the growth of commerce from very small beginnings at several ports not formerly open to foreign vessels, which now figure prominently in the subjoined lists. The substantial progress and commercial prosperity already achieved at the ports alluded to—viz., Moji, Shimonoseki, Otaru, Mororan, Yokkaichi, Misumi, and Kuchinotsu—afford good augury for the success of other places on the coast to which the Japanese Government now invites the merchant ships of all nations. Under the names of the less-known harbours will be found brief particulars of the leading staples produced in adjoining provinces, and in which, with enterprise, a direct sea-borne trade may conceivably be established.

The tables appended show the changes since 1894 in the volume of imports and exports at the various ports, and the ships of the several nationalities by which this maritime commerce was carried on.

FREIGHTS.

UNDER THE JAPANESE FLAG.

Tonnage, etc., Employed.

Exported in	Steamers.			Sailing Ships.		
	Value.	No.	Tons.	Value.	No.	Tons.
	£			£		
1895 -	345,329	144	109,748	47,712	953	22,187
1896 -	1,254,311	418	475,347	53,704	845	22,827
1897 -	2,309,878	513	583,986	96,456	1,218	34,669
1898 -	3,957,441	743	854,544	78,886	1,254	38,262
1899 -	6,541,062	1,114	1,359,813	103,712	1,105	54,136
Imported in						
1895 -	297,119	126	93,505	88,469	837	20,931
1896 -	1,926,066	415	472,860	138,090	834	22,634
1897 -	4,216,361	529	650,839	257,358	1,145	32,066
1898 -	6,381,999	701	845,458	244,874	1,213	36,379
1899 -	7,075,976	1,044	1,236,334	223,033	1,062	53,578

UNDER THE AMERICAN FLAG.

Value Exported in				Steamers.	Sailing Ships.
				£	£
1895	-	-	-	1,260,934	134,038
1896	-	-	-	733,040	70,713
1897	-	-	-	940,587	96,862
1898	-	-	-	651,845	86,473
1899	-	-	-	1,165,860	70,305
Imported in					
1895	-	-	-	116,734	106,690
1896	-	-	-	254,892	185,780
1897	-	-	-	267,565	219,330
1898	-	-	-	278,478	150,908
1899	-	-	-	303,876	12,494

NUMBER AND TONNAGE OF AMERICAN VESSELS
ENGAGED THEREIN.

In	Steam.		Sailing.	
	Tons.	No.	Tons.	No.
1895 -	83,087	34	38,915	62
1896 -	82,598	32	56,596	64
1897 -	69,467	26	57,357	50
1898 -	101,047	43	39,203	26

UNDER THE BRITISH FLAG.

Value Exported in					Steamers.	Sailing Ships.
					£	£
1895	-	-	-	-	7,826,964	169,917
1896	-	-	-	-	5,889,928	16,034
1897	-	-	-	-	8,155,188	34,133
1898	-	-	-	-	7,220,608	16,051
1899	-	-	-	-	8,517,465	31,081
Imported in						
1895	-	-	-	-	8,064,192	154,950
1896	-	-	-	-	10,088,861	213,461
1897	-	-	-	-	10,950,162	260,046
1898	-	-	-	-	13,234,269	315,377
1899	-	-	-	-	9,793,270	270,666

NUMBER AND TONNAGE OF BRITISH VESSELS
ENGAGED THEREIN.

In			Steam.		Sailing.	
			Tons.	No.	Tons.	No.
1895	-	-	1,741,894	907	44,451	80
1896	-	-	2,035,687	1,018	57,737	78
1897	-	-	1,890,227	950	84,668	70
1898	-	-	1,408,160	712	92,577	59

UNDER THE FRENCH FLAG.

Value Exported in				Steamers.	Sailing Ships.
				£	£
1895	-	-	-	1,401,447	—
1896	-	-	-	1,373,317	—
1897	-	-	-	1,904,245	—
1898	-	-	-	1,476,741	—
1899	-	-	-	2,065,203	—
Imported in					
1895	-	-	-	1,046,578	—
1896	-	-	-	1,298,125	—
1897	-	-	-	1,011,347	—
1898	-	-	-	1,261,125	—
1899	-	-	-	746,713	—

NUMBER AND TONNAGE OF FRENCH VESSELS
ENGAGED THEREIN.

In			Steam.		Sailing.	
			Tons.	No.	Tons.	No.
1895	-	-	61,330	29	—	—
1896	-	-	54,966	26	—	—
1897	-	-	56,119	26	—	—
1898	-	-	64,860	31	1,229	1

UNDER THE GERMAN FLAG.

Value Exported in					Steamers.	Sailing Ships.
					£	£
1895	-	-	-	-	1,614,260	8,893
1896	-	-	-	-	1,511,146	4,709
1897	-	-	-	-	1,719,808	—
1898	-	-	-	-	1,973,521	8,161
1899	-	-	-	-	2,063,272	—
Imported in						
1895	-	-	-	-	1,968,061	8,341
1896	-	-	-	-	2,333,667	19,667
1897	-	-	-	-	2,862,925	68,229
1898	-	-	-	-	3,837,843	97,322
1899	-	-	-	-	2,224,755	47,997

NUMBER AND TONNAGE OF GERMAN VESSELS
ENGAGED THEREIN.

In		Steam.		Sailing.	
		Tons.	No.	Tons.	No.
1895	-	333,388	365	6,533	6
1896	-	354,888	323	11,942	6
1897	-	448,126	348	23,729	13
1898	-	329,447	240	31,750	17

UNDER THE NORWEGIAN FLAG.

Value Exported in					Steamers.	Sailing Ships.
					£	£
1895	-	-	-	-	266,659	1,811
1896	-	-	-	-	370,744	—
1897	-	-	-	-	243,978	605
1898	-	-	-	-	299,303	—
1899	-	-	-	-	113,982	—
Imported in						
1895	-	-	-	-	415,809	2,523
1896	-	-	-	-	426,224	221
1897	-	-	-	-	497,941	4,876
1898	-	-	-	-	464,140	13,076
1899	-	-	-	-	381,712	12,106

**NUMBER AND TONNAGE OF NORWEGIAN VESSELS
ENGAGED THEREIN.**

In			Steam.		Sailing.	
			Tons.	No.	Tons.	No.
1895	-	-	235,703	238	3,445	6
1896	-	-	285,477	319	2,654	5
1897	-	-	182,774	193	1,848	2
1898	-	-	152,904	148	2,100	2

UNDER THE RUSSIAN FLAG.

Value Exported in					Steamers.	Sailing Ships.
					£	£
1895	-	-	-	-	30,768	60
1896	-	-	-	-	20,637	1,345
1897	-	-	-	-	19,216	957
1898	-	-	-	-	35,445	946
1899	-	-	-	-	85,963	1,017
Imported in						
1895	-	-	-	-	5,927	11
1896	-	-	-	-	7,176	888
1897	-	-	-	-	10,365	2,232
1898	-	-	-	-	13,342	6,523
1899	-	-	-	-	37,530	6,272

**NUMBER AND TONNAGE OF RUSSIAN VESSELS
ENGAGED THEREIN.**

In			Steam.		Sailing.	
			Tons.	No.	Tons.	No.
1895	-	-	85,515	66	804	6
1896	-	-	145,709	92	1,598	8
1897	-	-	152,247	79	694	6
1898	-	-	175,192	93	1,428	17

FREIGHTS: INWARD AND OUTWARD.

Japanese Empire.	Declared Value of Exports.				
	1895.	1896.	1897.	1898.	1899.
PORTS IN JAPAN :	£	£	£	£	£
Fushiki - -	8,097	4,204	2,172	1,087	8,642
Hakodate - -	74,888	89,870	126,726	124,871	211,605
Hakata - -	790	145	207	2,574	259
Hamada - -	—	—	2,644	531	683
Idzugahara - -	2,568	1,810	8,483	9,690	8,644
Itozaki - -	—	—	—	—	—
Kobé - -	8,880,795	4,031,781	5,140,808	6,011,964	7,582,088
Karatsu - -	28,557	19,722	31,891	39,939	37,019
Kuchinotsu - -	198,624	180,854	224,238	317,345	410,976
Misumi - -	—	—	—	—	35,300
Moji - -	138,701	281,192	450,886	616,692	615,572
Mororan - -	18,297	84,054	72,166	48,107	47,928
Nanao - -	—	—	—	—	1,301
Niigata - -	2,381	4,179	2,805	5,584	13,458
Nagasaki - -	424,419	494,802	554,201	658,727	620,777
Osaka - -	113,470	114,132	284,243	316,508	624,429
Otaru - -	13,189	17,533	41,472	18,893	37,631
Sasuna - -	794	1,036	2,009	23,790	30,213
Sakai - -	—	285	1,662	2,532	1,252
Shimidzu - -	—	—	—	—	4,185
Shimonoseki - -	279,589	337,024	345,243	340,448	425,429
Shishimi - -	1,939	2,083	2,346	3,036	2,418
Taketoyo - -	—	—	—	—	2,802
Tsuruga - -	—	—	—	—	17
Yokohama - -	8,479,163	6,169,610	9,070,098	8,031,243	10,827,873
Yokkaichi - -	—	—	—	—	—
PORTS IN FOR-					
MOSA :					
Anping - -	—	231,561	188,805	234,372	201,559
Keelung - -	—	1,652	5,057	7,988	8,327
Kiukong - -	—	10,685	14,699	13,646	9,332
Lukong - -	—	86,050	87,803	61,206	23,994
Makung - -	—	—	5,216	13,249	8,822
Oulung - -	—	—	8,221	8,671	6,921
Tamsui - -	—	781,503	830,867	745,110	727,129
Takow - -	—	25,164	20,833	28,165	22,532
Tokaku - -	—	—	70,514	102,300	60,496
Toncho - -	—	—	39,617	59,810	19,244
Tonkong - -	—	—	3,584	7,448	9,719
Yeokau - -	—	—	—	—	11,182

FREIGHTS : INWARD AND OUTWARD—*continued.*

Japanese Empire.	Declared Value of Imports.				
	1895.	1896.	1897.	1898.	1899.
PORTS IN JAPAN:	£	£	£	£	£
Fushiki -	3,736	4,478	4,082	3,044	6,772
Hakodate -	16,086	33,071	42,372	82,001	172,646
Hakata -	2,920	2,700	2,800	8,354	788
Hamada -	—	—	1,197	1,715	426
Idzugahara -	3,653	15,232	37,570	15,173	10,672
Itozaki -	—	—	—	—	—
Kobé -	6,309,842	8,254,659	11,074,183	13,813,379	12,028,952
Karatsu -	—	43	844	89	108
Kuchinotsu -	—	4,706	45,712	69,474	22,883
Misumi -	—	—	—	—	2,702
Moji -	—	—	—	—	68,922
Mororan -	—	—	—	—	—
Nanao -	—	—	—	—	441
Niigata -	3,342	41,377	3,946	90,093	11,584
Nagasaki -	637,078	1,002,438	1,360,123	1,969,864	1,114,751
Osaka -	262,126	421,379	442,474	355,593	640,509
Otaru -	796	853	2,006	2,121	14,476
Sasuna -	662	1,714	2,402	33,046	24,127
Sakai -	—	643	3,928	3,795	3,430
Shimizu -	—	—	2,003	—	12,037
Shimonoseki -	74,320	102,165	216,305	179,873	137,813
Shishimi -	1,968	1,601	4,412	3,680	1,637
Taketoyo -	—	—	—	—	44,955
Tsuruga -	—	—	26	—	467
Yokohama -	5,609,583	7,280,379	8,683,685	11,101,414	7,645,300
Yokkaichi -	—	—	—	17,498	69,898
PORTS IN FOR-					
MOSA :					
Anping -	—	235,768	255,081	323,092	223,660
Keelung -	—	20,878	36,777	76,484	40,800
Kiukong -	—	17,011	26,235	32,919	21,349
Lukong -	—	58,354	81,715	82,233	37,627
Makung -	—	—	15,886	24,917	21,083
Oulung -	—	—	8,186	12,398	8,264
Tamsui -	—	487,945	741,062	987,029	966,873
Takow -	—	43,142	34,653	38,041	27,409
Tokaku -	—	—	32,621	51,403	39,839
Toncho -	—	—	30,528	51,949	20,053
Tonkong -	—	—	3,230	7,474	10,183
Yeokau -	—	—	—	—	10,164

INWARD.

JAPANESE AND FOREIGN VESSELS WHICH ENTERED AT JAPANESE PORTS DURING 1899.

Ports.	JAPANESE.			FOREIGN.		
	Steam.		Sail.	Steam.		Sail.
	No.	Tons.	No.	Tons.	No.	Tons.
Fushiki -	-	-	15	1,551	-	-
Hakodate -	-	-	87	7,953	7	2,471
Hakata -	64	29,449	11	116	-	-
Hameda -	-	-	15	217	-	-
Idzughahara -	-	-	87	1,522	-	-
Kobé -	26	20,458	5	1,036	14	24,895
Karatsu -	238	303,198	30	2,493	-	-
Kuchinotsu -	12	15,249	1	18	2	1,850
Misumi -	101	158,196	-	-	-	-
Moji -	9	12,556	1	5	-	-
Mororan -	171	188,136	-	-	2	952
Nagasaki -	2	2,246	-	-	-	-
Nigata -	205	231,374	45	2,314	41	31,456
Osaka -	6	6,402	27	1,744	-	-
Otaru -	39	16,615	3	322	1	308
Sasuna -	26	14,478	20	2,070	1	18
Sakai -	29	5,403	116	1,395	-	-
Shimidzu -	-	-	28	612	-	-
Shimonoseki -	2	1,504	1	80	-	-
Shishimi -	33	14,311	380	24,839	-	-
Taketoyo -	-	-	175	1,513	-	-
Tsuruga -	8	1,794	-	-	-	-
Yokkaichi -	-	-	4	25	-	-
Yokohama -	6	6,527	-	-	-	-
	72	148,448	11	3,743	38	53,300

OUTWARD.

JAPANESE AND FOREIGN VESSELS WHICH CLEARED FROM JAPANESE PORTS DURING 1899.

Ports.	JAPANESE.			FOREIGN.		
	Steam.		Sail.	Steam.		Sail.
	No.	Tons.		No.	Tons.	
Fushiki -	-	-	No. 15 Tons. 1,653	-	-	No. - Tons. -
Hakodate -	88	56,188	113 11,617	18	16,803	12 4,649
Hakata -	-	-	18 197	-	-	-
Hamada -	-	-	21 543	-	-	-
Izuzugahara -	26	20,884	82 1,207	-	-	-
Kobé -	70	88,899	12 1,137	108	257,615	23 45,091
Karatsu -	22	26,964	37 3,015	7	6,450	-
Kuchinotsu -	115	181,763	3 146	58	109,021	2 1,850
Misumi -	13	17,526	-	8	3,146	-
Moji -	324	392,408	4 1,206	184	389,475	3
Mororan -	6	6,461	-	38	64,655	-
Nanao -	1	1,067	-	-	-	-
Nagasaki -	204	260,802	11 573	411	685,449	44 34,025
Niigata -	7	7,469	22 1,420	-	-	-
Osaka -	19	9,019	2 398	1	80	1 308
Otari -	41	31,582	16 2,638	14	18,649	1 18
Sauna -	29	5,394	97 1,032	-	-	-
Sakai -	-	-	85 747	-	-	-
Shimonoseki -	59	28,178	397 24,381	242	428,374	-
Shishimi -	-	-	211 1,513	-	-	-
Taketoyo -	-	-	1 93	-	-	-
Tsuruga -	-	-	2 17	-	-	-
Yokohama -	90	230,211	6 603	126	299,584	34 50,426

HARBOURS.

Under the new treaties which came into force in July, 1899, twenty-seven ports, in addition to the five that were opened in the years 1859-1868, were declared open to foreign commerce. The thirty-two ports, in all, are thus situated :

Opened.					
1859	Yokohama, in the province of Musashi			} (Nippon)	
1868	Kobé	"	Settsu		
1859	Nagasaki	"	Hizen	(Kiushiu)	
1865	Hokodate	"	Hokkaido	(Yeso)	
1867	Niigata	"	Echigo	} (Nippon)	
1899	Shimidzu	"	Suruga		
	Taketoyo	"	Owari		
	Yokkaichi	"	Isé		
	Shimonoseki	"	Nagato		
	Hamada	"	Iwami		
	Miyadzu	"	Tango		
	Tsuruga	"	Echizen		
	Nanao	"	Noto		
	Fushiki	"	Echiu		
	Sakai	"	Hoki	} (Kiushiu)	
1901	Itozaki	"	Bingo		
1899	Moji	"	Buzen		
	Hakata	"	Chikuzen		
	Karatsu	"	Hizen		
	Kuchinotsu	"	Hizen		
	Misumi	"	Higo		
	Idzugahara	} in the island of Tsushima			
	Sasuna				
	Shishimi				
	1899	Naba	"	Loochoo	} (Hokkaido)
		Otaru	"		
Kushiro		"	Yeso		
Mororan		"			
Kelung		"			
Tamsui		"			
Takow		"	Formosa		
Anping					

The coast-line is throughout deeply indented at intervals of only a few miles with bays and inlets, many of which form truly admirable harbours for the numerous native and foreign craft trading to and from Japan or between her various ports.

In the table below the principal islands appear in order of size,

with the number and area of the smaller islands adjacent thereto, and it will be observed that although Kiushiu is half the area of Yezo, it possesses a coast-line, counting in the neighbouring islets, which number 150, that is thrice the length of that of the northernmost division of the empire. Kiushiu is, for its size, the richest in harbours of the whole group, possessing for every 15 square miles of its surface no fewer than 10 miles of coast. The general average of the whole empire is very much below this, being rather less than 4 miles of shore to 15 square miles of territory.

The Japanese islands number over six hundred, with a total coast-line of 18,136 English miles, or thrice that of the British Isles.

Principal Islands.	Number of Adjacent Isles.	Proportional Area.	Length of Coast- line (Miles).
Nippon - - -	166	53·84	6,040
Yezo - - -	12	18·70	1,533
Kiushiu - - -	150	9·67	4,508
Formosa - - -	29	8·33	859
Shikoku - - -	75	4·36	1,649
The Kuriles Chain -	32	3·82	1,495
The Loochoo Chain -	55	0·58	769
Sado - - -	—	0·21	130
Tsushima - - -	5	0·17	503
Awaji - - -	1	0·14	100
Oki - - -	1	0·08	185
Pescadores - - -	47	0·05	99
Iki - - -	1	0·03	91
Bonin group - - -	20	0·02	175
		100·00	18,136

Kiushiu, which is less than a tenth of the empire in area, has one-fourth of the coast.

The harbours best known to the masters of foreign vessels are, of course, those of Yokohama, Kobé, Hakodate, Nagasaki, and Niigata.

YOKOHAMA.

At Yokohama the anchorage was formerly very much exposed, but within recent years two immense breakwaters have been constructed, one projecting 5,383 feet to the eastward, the other

extending 5,702 feet due north, and enclosing a water area of over 2 square miles, with a depth of from $3\frac{1}{2}$ to $5\frac{1}{2}$ fathoms. An iron pier 1,895 feet long has likewise been constructed by the Japanese Government to facilitate loading and discharging, for the use of which pier dues are levied at the rate of one halfpenny per registered ton for the first 24 hours, and a farthing per ton for every additional hour. The largest ocean-going steamships can berth alongside this pier, which is fitted with all modern mechanical appliances for handling cargo, and has a railway track over the greater part of its length communicating with the main line of the Japanese Government railways, so that speedy transhipment of goods and prompt despatch to destination are both assured.

Yokohama boasts the possession, moreover, of two splendid graving-docks.

By a reclamation of the foreshore the area at present available in front of the Custom House for transaction of business is being very conveniently enlarged, and a railway connection between it and the principal depot of Yokohama is being formed, so that facilities for dealing with a vastly increased volume of trade are among the benefits that will presently be conferred upon the port. The work is one that necessarily must take time, and it is not to be finished until the latter part of 1903.

It has recently been arranged that warehouses at the Customs Wharf in Yokohama shall be made available for the temporary storage of goods in bond. The time-limit is three months, but this may be extended at the pleasure of the Customs Commissioner.

Much-needed improvements are now contemplated in the harbour at Tokio. Plans have been considered by the City Council which involve an expenditure of four millions sterling and twelve years' work. The scheme is in abeyance for the moment, but is likely to take definite shape before long. At present seagoing vessels cannot approach within four miles of any convenient landing-place, and goods have to be transported by lighters.

Owing to the difficulty of securing the effective co-operation of the seventeen foreign Powers possessing jurisdiction in the Settlement of Yokohama, it was practically impossible, prior to 1898, to enforce any efficient system of harbour regulations at this port.

There are now schedules of regulations and officials to see that those regulations are complied with.

KOBÉ.

At Kobé the limits of the harbour, which is good and deep enough to afford a safe anchorage for vessels of almost any size, extend from the old bed of the Ikuta River on the north-east to Cape Wada on the south-east, a distance of nearly two miles. There are three piers, the largest, of iron, having been constructed by the Kobé Pier Company, and measuring 586 feet in length. The other two, which are railway piers, belong to the Tokaido and Sanyo Railway Companies respectively, and in addition there are several small boat-piers and wharves. The iron pier is situated close to the Custom House, and dues are exacted in accordance with a fixed tariff, varying from £5 to £15 per vessel for seventy-two hours' accommodation, according to the quantities of cargo to be loaded or discharged. Commodities for shipment are received in the company's sheds, and in the case of incoming vessels notice is given beforehand by the agents on shore, so that the Pier Company is enabled to prepare berths for unloading. The Customs authorities demand that a permit for loading or discharging shall be taken out as quickly as possible after the ship's arrival in port.

Kobé is well equipped, moreover, with docks, there being two owned by the Kawasaki Shipbuilding Yard. The first of these is 600 feet long and 24 feet deep, and can accommodate vessels of 2,000 tons, whilst the other is fit to receive ships of 500 tons, being 400 feet long by 20 feet deep. The tariff for docking, like that of the Pier Company, is based upon a minimum stay of seventy-two hours. For vessels of 1,200 tons the charges amount to £55, for 700 tons they are £40, for 400-ton ships £25, and for 200-ton vessels £15.

The construction of floating wharves, and an extension of the Custom House premises, are projects to which the Government has already accorded its sanction, the appropriation under this head for the financial year ending with March, 1902, having been £6,482.

HAKODATE.

Hakodate, the chief port of Yezo, has a harbour 3 miles long and 3 miles wide, which provides safe shelter in all winds. There is no pier, the loading and unloading of vessels being accomplished by the

aid of barges only. Hakodate Peak, 1,106 feet high, to the south of the harbour, occupies in some respects the position of the Rock at Gibraltar, and the base is strongly fortified. It is joined to the mainland by a sandy promontory, on which in part the town of Hakodate stands. A good deal of dredging had to be done to improve the approaches to the deep-water port, but the local authorities were energetic, and the harbour improvement scheme, as originally planned, is now practically complete. There is a patent slip at Hakodate which is capable of taking vessels up to 1,200 tons. According to scale, the charge for this accommodation is about £18 for three days in the case of vessels up to 200 tons, with 10 per cent. extra per day for each subsequent day the slip is used. Above 200 tons the rate is augmented by, roughly, £3 for every 50 tons up to 800 tons, and £3 for every 100 tons from 800 to 1,200, for three days' use, and 10 per cent. daily for additional days. In other words, a ship of 1,000 tons may occupy the slip for three days at a cost of about £60, paying £6 for every additional day she remains on it.

A dry-dock, moreover, is in process of construction, and will probably be finished this year.

NAGASAKI.

At Nagasaki the docking facilities are upon a very extensive scale, for, in addition to two dry-docks, there is a patent slip capable of admitting vessels of 1,500 tons. One of the docks is 523 feet long, 87 feet wide at the entrance, 77 feet on sill, and 28 feet deep; the other is 371 feet long and 78 feet wide. A third dock, over 600 feet long and 120 feet wide, is now in course of construction.

The anchorage, facing the town, at the head of a magnificent inlet which is almost land-locked, 2 miles long and from 600 yards to a mile wide, is perfectly safe for ships of any size, but the loading and discharging have to be done by means of lighters, as the port at present does not possess a pier. But the progress that is being made with the new Harbour Scheme, whereby a large tract of land at the head of the inlet is gradually being reclaimed from the sea, and substantial embankments, faced with concrete, are being formed, with deep water alongside for vessels to berth at, gives promise of a speedy remedy being forthcoming for the lack of wharfage accommodation hitherto experienced. Dredging opera-

tions to facilitate the approach of large vessels to the new harbour and jetties are being conducted with commendable vigour, and there can be no doubt that the entire work will be carried out on the most approved modern engineering lines. There is some expectation that the Japanese Government will declare Nagasaki a free port; and certainly its geographical position, the insignificant value of its exports, with the exception of that of coal for ships' use, and the fact that its present prosperity is entirely due to the shipping visiting the port, constitute strong arguments (as the British Consul in his report for 1900 observes) in favour of the proposal.

NIIGATA.

Niigata was one of the five ports originally selected for purposes of foreign trade, but an exposed situation and a troublesome bar at the mouth of the river Shinano, on the banks of which noble stream the town of Niigata stands, in 38° N. Lat., have proved insuperable obstacles to its development. Steamers are obliged at times to discharge cargo at Yebisu-Minato, a harbour in the island of Sado, 30 miles distant. In Sado are the ancient silver and gold mines, which have been worked from very remote days.

These five well-known 'Treaty Ports,' as they were formerly termed, by no means exhaust the possibilities of Japanese harbours for the accommodation of shipping, for the under-mentioned places have all more or less perfect natural advantages in this respect, and are frequented by large steamships, flying the Japanese ensign. Nominally these ports are open to the commerce of all nations; but, with the exception of those specially indicated as ports of call for foreign ships, very little trade has hitherto been carried on at any of them with vessels not owned by Japanese. The list comprises a number of places at which steamers can coal.

MOJI.—Owing to the fact that ocean-going ships are now permitted to load coal at this port, it is rapidly becoming as well known in the shipping world as Port Said or Singapore. It is situated on the southern shore of Shimonoseki Straits, at the western entrance to the 'Inland Sea' of foreign charts—the *Suwo Nada* of Japanese—and is in the province of Buzen. The anchorage is found in a deep bay, at the northern extremity of which is Moji Point, where the navigable channel to the eastward is but one-third of a mile wide.

The bay affords good holding-ground, well clear of the tidal current that sweeps through the straits at ebb and flood with a velocity of seven to eight knots an hour. Coaling is done by lighters, and the speed at which the coalheavers, principally women and girls, effect the transfer from barge to bunker is remarkable. It has been claimed for them, and probably with strict truth, that at labour of this kind they excel in rapidity the Malays of the Straits Settlements or the Arabs of the Suez Canal. Facing Moji is the harbour of *Shimonoseki*, otherwise *Akamagaseki*—the Red Horse barrier—simplified into *Bakan*, which means precisely the same thing, and is the name of the port in common use among Japanese. *Shimonoseki* Straits are very strongly fortified, the seven formidable batteries mounting heavy guns of the most approved modern pattern. The harbour on the north side is mainly used by native sailing craft, and is unsuitable for steamers of any size, though it has happened occasionally that sailing vessels under foreign flags have dropped anchor among the junks close to the town of *Bakan*. *Moji* will, doubtless, ere long be equipped with a pier at which ships may conveniently be berthed. A British Consulate was established there in 1901.

KUCHINOTSU.—This harbour is situated at the entrance of the *Shimabara* Gulf, and 35 miles by sea from the *Miiké* coal-mines, for which it has served since 1877 as a place of shipment, though destined soon to be supplanted by *Misumi*, close by. *Kuchinotsu* is a well-sheltered and safe harbour, though there is a tide race in the *Hayasaki* Channel not far away, which at spring tides proves to be something of a trial to vessels making for this port. The *Mitsui* Company claims to be able to load 4,000 tons of coal in a day. The annual export of coal from *Kuchinotsu* is now nearly 400,000 tons.

MISUMI.—*Misumi* Harbour is on the eastern side of *Shimabara* Gulf, in latitude 32° 37' N., longitude 130° 27' E., well sheltered from all directions, and as very little tide exists, cargo-boats find it easy to haul alongside of vessels, and work can be carried on in any weather. The inner harbour is superior to the outer one, with plenty of room, and when the reclamation works shall have been completed there will be wharfage accommodation in abundance. The *Mitsui* Company have a strip of foreshore half a mile in length, which they are carrying out seaward, so that vessels eventually will lie alongside the quay in five fathoms of water. The railway—a

branch of the Kiushiu main line—will run direct to the wharf, and bring coal trains from the Miiké Mines alongside steamers that may visit Misumi to load. It is probable that in the near future Misumi will become the sole port of shipment for the produce of the mines named. Lighthouses have been provided for the main channel and its approaches, and the harbour is well buoyed.

YOKKAICHI. This flourishing port, situated on Isé Bay, in the Owari Gulf, and belonging territorially to Japan's most ancient province, is that to which vessels were at one time frequently chartered to proceed in order to load rice for export, but of late years it has become a place of importation rather than of exportation, and rice is more conveniently sent by rail to be shipped from Kobé or Yokohama. Yokkaichi is centrally situated, and the approach from the Pacific is easy. The harbour is well sheltered by a promontory which protects it during easterly gales, and its position at the head of the Owari Gulf renders it fairly safe in winds that blow from other points of the compass.

TAKETOYO is a harbour likewise within the Owari Gulf, and only 18 miles, as the crow flies, due east from Yokkaichi. But it is 40 miles distant by sea, as the long Cape of Ono intervenes. Taketoyo is well out of the beaten track, and approach to it demands extreme caution in the navigator; but it is equipped with a branch railway joining it to the main trunk line, and taps a very fertile region of Central Japan. The channel from the entrance to Owari Gulf is efficiently buoyed, and partly lit from the opposite headland near Toba.

SHIMIDZU is a fairly flourishing commercial port on the coast of Tsuruga, close to the base of the great mountain Fujiyama. Shimidzu is the shipping port for the large district of Shidzuoka, wherein cotton-spinning has become an important industry, and from which also large quantities of the best Japanese rice are annually exported.

HAKATA, and the large town which adjoins it named *Fukuoka*, stand on the shores of an almost landlocked harbour on the west coast of Kiushiu. KARATSU is a port a little farther to the south-west. The trade of these places depends on shipments of coal and rice. Both are tolerably prosperous, and Karatsu coal is reputed the best house-coal Japan produces. Hakata was the base of the earlier operations against the Satsuma rebels in 1877, and its harbour is large and commodious, affording excellent shelter for

any number of vessels that conceivably may make use of it simultaneously in the years to come.

There are three ports in the twin islands of Tsushima, lying midway between Nippon and Korea, in the Krusenstern Strait. These harbours are the depots of a considerable trade with the adjacent Korean Empire, and are growing rapidly in importance. They are IDZUGAHARA, SHISHIMI, and SASUNA.

The harbours on the west coast of Nippon available for foreign trade are :

HAMADA,	NANAO, and
MIYADZU,	FUSHIKI.
TSURUGA,	

And of these Hamada is the farthest south. Hamada cannot be described as well sheltered—it is, indeed, almost an open roadstead—but as a port it opens up a country where much rice is grown for export, and it is close to the copper mines of Iwami province.

MIYADZU, on the other hand, is a magnificent harbour, the town standing on the edge of an inlet to which entrance is obtained by passing through a narrow channel that is almost bridged by the celebrated *Ama-no-Hashidatē*, a narrow promontory, clothed with pine-trees, jutting out from the southern shore. *Hashidatē* ranks as one of the *Sankei*, i.e., the three most famous and superlatively beautiful landscapes in all Japan. Thousands of pilgrims are attracted thither every year. As a port Miyadzu is likely to do well, but it is little known commercially save to the Japanese captains of coasting vessels, and has only very recently been added to the list of harbours open to trade.

TSURUGA, on an inlet in the same gulf as Miyadzu, but 40 miles to the eastward thereof, is a much more promising place, and has lately been made the terminus of a line of steamers trading to Vladivostock, which it directly faces, at a distance of about 550 miles. Tsuruga is the terminus, moreover, of a railway communicating directly with Kyoto, Osaka, and Kōbé, on the one hand, and with Tokio and Yokohama on the other. It is already the centre of a flourishing junk trade, sailing ships from the northward making it their rendezvous and exchanging produce with the junks that come thither from the west.

• NANAO and FUSHIKI are ports in close proximity to each other in Toyama Bay, a hundred miles or so farther up the west coast of

Nippon than Tsuruga Gulf. Fushiki is close to the Echigo oil-bearing region, which has a considerable output of petroleum.

MORORAN, sometimes termed Shin-muroran, is a port in Volcano Bay, from which starts a line of railway to Sapporo and the valuable coal-fields adjacent to the Ishikari River. A ferry-boat plies between Mororan and Mori, on the other side of the bay, whence there is a carriage road to Hakodate. The harbour of Mororan is much frequented by foreign steamers which load coal there, and also timber in the shape of railway sleepers. Yezo is mainly a forest, and its trees yield timber suitable for a variety of purposes. Mororan is to have a pier and ample facilities for handling cargo in the near future.

OTARU, or Otarunai, is a harbour on the north coast of Yezo, in Sapporo Bay, and sheltered from all but directly north winds. Cape Kamoi protects it on the west. The port owes its existence to the resolve of the Government, in 1870, to take in hand the colonization of almost uninhabited Yezo, renamed Hokkaido, and to establish the seat of colonial government at Sapporo. Otaru is 25 miles from the Hokkaido capital, and forms its natural shipping port. A railway joining the two places has for some years been in existence, and the value of land in the vicinity has of late vastly increased. Foreign sailing vessels never visit the harbour, but fourteen foreign steamers, six being British and five Russian, entered it in 1900, which is regarded as an encouraging sign of future prosperity. Otaru's commerce is in fact rapidly increasing, and its situation, directly facing the Russian settlement of Saghalin, must always endow it with a certain strategical importance. It is the seat of a thriving herring-fishing industry.

ITOZAKI.—The number of places in Japan proper where trade with foreign countries may be carried on is now thirty. The last port to be opened was Itozaki, in the province of Bingo, which borders the Inland Sea, and it is favourably situated for the commerce of a region that is fairly productive, though hitherto the shipping business has been almost wholly conducted by 'junk.'

FORMOSAN PORTS.

Formosa was joined to the Japanese Empire in accordance with the Treaty of Shimonoseki in 1895. Much of the island remains unexplored. The two principal ports in the north are Keelung and

Tamsui. They lie nearly on the same parallel of latitude, and are separated by a mountainous region abounding in solfataras.

Near Keelung is a coal-mine, yielding a supply of that mineral which the Chinese formerly exported, but the quality is somewhat inferior.

There is a line of railway joining Keelung with Taipeh, the new capital of the island and seat of government. This railway will presently be extended to Tai-Nan, the chief town of South Formosa, close to which is the port of Anping. There is a telegraph-line the whole way, and a submarine cable was laid many years ago from Tamsui to Sharp Peak, on the coast of Fuh-Kien, China. More recently the Japanese have laid a cable joining the port of Keelung with the Loochoo Group, and thence to Satsuma, in the extreme south of the Japanese island of Kiushiu.

Keelung possesses the best harbour in Formosa. It is a spacious and well-sheltered anchorage, available for large vessels throughout the year.

Tamsui and Anping are obstructed by bars, which can only be passed at high tide, in calm weather, by ships of light draught.

To open Formosa effectively to foreign trade the Government will need to take in hand the construction of one or two good harbours, and it is probable that Tamsui, together with Takow, which is a port on a lagoon 30 miles south of Anping, will be chosen for the purpose.

The Pescadores Islands lie midway between Formosa and the mainland of China. A Japanese naval squadron ordinarily makes them its headquarters.

POSTAL FACILITIES: TELEGRAPHS AND TELEPHONES, ETC.

Japan is in the Postal Union, the rules of which apply, 10 sen being taken as equivalent to 2½d.

For an additional fee of 6 sen correspondence is deliverable by express. In Tokio, Kyoto, and Osaka the fee is 10 sen.

Money orders are issued for most foreign countries at low rates which vary with exchange.

Telegraph charges, inland, are 20 sen for the first 15 katakana

characters, and 5 sen for every succeeding 5, or fraction of 5, characters. The names and addresses both of sender and addressee pass free.

Foreign telegram rates vary with the exchange for despatches from Japan. The rates to Japan, from London, are: By Eastern Telegraph Company's cables, 7s. 9d. per word; by Great Northern Company's route, 6s. 2d. per word.

The inland postal rates in Japan are somewhat puzzling to foreigners, but the weights do not in practice present any insuperable difficulty, as letter scales adapted to the postal department's own standard are readily procurable at a trifling expenditure.

The unit of weight is 1 mommé = 0.13227 oz. The inland postage rate is 3 sen for 4 mommé.

Postcards are charged 1½ sen each.

Newspapers and periodicals, one copy per 16 mommé, roughly 2 oz., ½ sen; two or more copies, per 16 mommé, 1 sen.

The rate for books, printed circulars, and samples, per 30 mommé, is 2 sen. Samples must not exceed 100 mommé in weight.

(Roughly, this is ¼ lb. for a halfpenny.)

Seeds pass at half this rate—*i.e.*, 30 mommé for 1 sen.

Parcels according to distance and weight. A parcel weighing 8½ lb. is sent 24½ miles for 3½d.

The registration fee is 6 sen per article.

Inland money orders are granted up to £5 to one payee on one day, and Inland postal notes are issued up to a maximum of 6s.; fee, 3 sen.

It will afford some idea of the completeness with which the postal system of the Japanese Empire has been adapted to the needs of the population if a few figures are here introduced to indicate the character of the services rendered.

LENGTH OF POSTAL ROUTES.

					English Miles.
1899.	Overland	...	...	...	29,500
"	Railway	...	...	...	9,008
"	River	...	...	...	434
"	Sea	...	...	...	64,120
					103,062

POSTAL MATTER CONVEYED.

1899. Number of letters	...	...	145,233,511
„ postcards	...	...	330,824,967
„ journals and pamphlets	...	...	109,023,612
„ books	...	...	8,000,883
„ samples and seeds	...	...	1,337,059
„ parcels	...	...	24,775,896
„ registered letters and parcels	...	...	8,127,975
			<hr/> 627,323,903

This gives an average for each inhabitant of articles sent through the post amounting to 14·35.

In 1894 this average per inhabitant was 9·44.

MONEY ORDERS: INLAND AND FOREIGN.

Inland.

Year.	ORDERS ISSUED AND PAID.	
	No.	Value.
		£
1899 - - - -	6,786,583	6,887,427
1898 - - - -	6,338,459	5,620,143
1897 - - - -	5,793,401	5,454,142
1896 - - - -	4,931,694	4,568,790
1895 - - - -	4,486,346	4,241,062
1894 - - - -	4,022,903	3,401,344

Foreign.

Year.	ORDERS ISSUED.		ORDERS PAID.	
	No.	Value.	No.	Value.
		£		£
1899 - -	5,222	13,798	23,651	154,743
1898 - -	4,381	11,267	15,051	86,934
1897 - -	3,960	10,881	12,953	72,983
1896 - -	3,581	9,382	11,097	58,064
1895 - -	3,319	9,164	10,226	55,607
1894 - -	2,442	7,946	7,314	37,941

TELEGRAPHS.

Special allusion has already been made to the conspicuous part played by the telegraph in the days immediately following the restoration of the Emperor to visible rule and control. It only needs that the actual length of the wires provided to date should be set forth to enable the reader to obtain a true perception of the thoroughness and determination with which this grand Imperial

Telegraph Lines (all State Property).

Year.	Length of Lines.	Length of Wires.	Inland: No. of Despatches.	Average per Inhabitant.
	English Miles.	English Miles.		
1899 - -	14,220	60,857	14,567,216	31·4
1898 - -	13,237	51,402	15,342,535	33·06
1897 - -	12,847	45,902	13,979,872	30·4
1896 - -	11,800	38,579	10,857,653	25·45
1895 - -	9,703	30,530	9,097,102	21·54
1894 - -	9,701	28,757	8,120,962	19·48

NOTE.—To the length of lines and wires given above should be added 1,793 miles of submarine cable, connecting the four principal islands and joining Formosa and the Loochoo group with the other portions of the Japanese Empire.

Year.	Foreign Telegrams Inward.	Foreign Telegrams Outward.
1899 - - -	205,717	196,561
1898 - - -	166,622	161,165
1897 - - -	160,366	156,140
1896 - - -	120,997	120,500
1895 - - -	165,053	148,071
1894 - - -	127,955	110,857

work has been executed in all its details: Formosa has been connected with headquarters by a submarine cable which touches at the Loochoo group, and every outpost of the empire has been electrically joined to the capital. Politically, the Japanese telegraphic system is an engine capable of exerting immense power; strategi-

cally, it is invaluable. When the network of communications was planned in 1871, the aim was to place the interior in instantaneous touch with the coast, and to constitute at Tokio a sensitive centre from which electrical nerves should spread to every part of the Imperial dominions. That programme was long since carried out in its entirety. The telegraph bureau, moreover, yields an appreciable and ever-increasing revenue to the State.

TELEPHONES.

Centres.	No. of Exchanges.	No. of Subscribers.	LENGTH OF WIRES.	
			Aerial.	Subterranean.
			English Miles.	English Miles.
Tokio - -	4	5,748	18,410	5,628
Yokohama - -	1	1,052	3,751	544
Nagoya - -	1	359	2,119	—
Kuwana - -	1	Completing	92	—
Yokkaichi - -	1	"	147	—
Kioto - -	1	612	2,598	31
Osaka - -	2	2,083	4,623	2,783
Sakai - -	1	230	243	—
Kobé - -	1	916	2,366	—
Shimonoseki - -	1	145	157	—
Fukuoka - -	1	228	417	—
Moji - -	1	Completing	—	—
Nagasaki - -	1	300	589	—
Sapporo - -	1	140	173	—
Hakodate - -	1	Completing	—	—
Otaru - -	1	"	697	—
Total - -	20	11,813	36,382	8,986

And just as the electric telegraph played a leading part in the preliminary stages of the country's development, so it is highly probable that electricity, employed in another way, will, by its beneficent influences, aid yet more substantially than ever to further the advancement of the Japanese Empire. For there unquestionably is to be found within its boundaries an almost ideal field for the employment of electric traction. Not a little has been

done already by local enterprise, and residents in Kioto point with pride to the use to which electricity has been put at the entrance to Lake Biwa, in their vicinity, where canal boats are hauled up an inclined plane, from the lower waterway to the margin of the lake, by this means. It constitutes an engineering feat that has by no means received due recognition from the outside world, and reference is made to it here chiefly to illustrate the laudable aptitude of the Japanese for turning to account every improvement in labour-saving machinery that comes their way.

ELECTRIC LIGHTING.

It may surprise not a few readers of these notes to discover how effectively the advantages conferred by the use of the electric light in public thoroughfares have been demonstrated in far Japan. The list appended shows in how many districts or prefectures the lighting is being undertaken by Japanese companies formed for that express purpose, and, what is also of real importance, how those companies, one and all, contrive to keep their expenditure well within the bounds of their receipts, and in the majority of cases even to exhibit a commendably low ratio of outgoings to income. That income is almost entirely derived from the lamps supplied to private consumers.

The extent to which the light is used in factories at Osaka, Kioto and other places can be judged from the figures given in the list. Every modern mill in Japan has its electrical installation as a matter of course. In public buildings, too, this system of lighting is almost universal. To those who knew Japan thirty years ago it will appear almost incredible that remote towns like Nara; for example, should be lit throughout with electric light. Yet this is but one of the many proofs that Japan has given to the rest of the world that her watchword is 'Progress.'

Electric Lighting Companies.

Districts.	No. of Companies.	Capital Invested.	Public Lamps.	Private Lights.	Annual Income.	Annual Expenditure.
		£			£	£
Tokio - -	4	275,515	300	59,625	53,204	32,981
Osaka - -	2	110,500	256	32,007	43,119	18,456
Yokohama (including Kanagawa) -	3	52,005	169	16,059	17,388	9,846
Kioto - -	1	42,000	734	13,929	15,342	8,469
Kobé (including Hiogo) -	2	40,375	136	10,956	14,003	6,619
Aichi - -	3	31,145	427	11,174	11,316	7,874
Miyagi - -	2	30,000	225	7,111	5,854	3,733
Miye - -	3	14,000	294	3,552	3,922	2,421
Nagano - -	2	13,000	148	2,281	3,541	3,192
Hiroshima - -	2	12,800	104	2,359	3,780	2,629
Nagasaki - -	1	8,000	6	1,745	2,537	1,417
Yamaguchi - -	2	7,676	—	2,229	6,652	2,771
Kumamoto - -	1	7,500	21	2,164	2,843	2,518
Shidzuoka - -	3	7,500	125	2,574	2,626	1,414
Wakayama - -	1	6,825	—	1,138	1,450	763
Gumma - -	2	6,200	150	1,486	1,468	1,097
Aomori - -	1	6,000	118	1,727	1,729	1,206
Kagawa - -	1	6,000	105	1,127	1,380	948
Niigata - -	1	5,000	163	1,562	1,533	622
Nara - -	1	5,000	61	777	1,043	791
Okayama - -	1	5,000	34	1,279	2,300	1,481
Tokushima - -	1	5,000	32	1,417	1,785	1,164
Yezo (Hokkaido) - -	1	5,000	37	1,400	2,415	1,961
Fukushima - -	1	4,500	63	1,003	1,007	424
Gifu - -	2	4,000	—	1,620	1,074	600
Shimane - -	1	3,500	3	759	1,262	871
Tochigi - -	1	2,500	49	282	590	315

TRAMWAYS.

In 1899 there were fifteen Tramway Companies in Japan, and the total length of the lines owned by them was 111.65 English miles. Of this mileage 14 per cent. was supplied with electricity as the motive power, and on the remainder of the lines the haulage was done by horses.

Tramways in Japan.

District.	Number of Companies.	Capital.	Length, End to End (Miles).	Number of Cars.	Number of Horses.	Number of Passengers 1899.	Receipts.	Expenses.	Profits.
		£					£	£	£
Tokio	1	145,000	13½	282	1,503	27,616,374	101,162	53,377	47,785
Kanagawa	2	70,575	9.15	26	94	646,604	7,271	3,909	3,366
Gumma	2	8,960	22½	74	85	204,671	6,167	4,711	1,456
Shizuoka	3	14,400	20.85	109	37	457,349	7,954	7,032	922
Aichi	2	28,250	6.3	14	—	2,070,147	4,925	3,111	1,814
Fukushima	1	3,420	9.2	8	34	46,326	1,534	1,277	257
Akita	1	2,500	3.4	5	15	79,760	106	58	48
Kioto	1	37,500	9.25	33	—	2,907,762	11,056	6,150	4,906
Oita	1	7,000	7.5	12	42	?	—	—	—
Yezo (Hokkaido)	1	15,000	10	31	125	2,027,127	4,831	3,875	956
	15	332,605	111.65	594	1,935	36,056,120	145,006	83,496	61,510

The figures for the previous five years were:

In.	Number of Companies.	Capital.	Length, End to End (Miles).	Number of Cars.	Number of Horses.	Number of Passengers.	Receipts.	Expenses.	Profits.
		£					£	£	£
1898	10	203,553	78.75	442	1,620	36,872,845	108,058	72,438	35,620
1897	9	50,417	72.5	401	1,353	29,231,727	79,037	44,764	34,273
1896	10	165,780	87.5	399	1,269	25,313,552	66,589	36,149	30,440
1895	9	124,530	74	321	901	18,448,835	47,519	26,248	21,271
1894	8	92,530	73	285	790	11,870,816	34,513	20,356	14,157

In *Tokio* the tramways are $13\frac{1}{2}$ miles in length from end to end, and there are over 25 miles of track. The number of passengers carried in 1899 was 27,616,374, and the total distance run by the trams equalled 4,548,552 English miles.

			£
The total receipts were	...	...	101,162
The expenses amounted to	...	...	53,377
			<hr/>
Leaving profits equal to	...	...	47,785

In connection with this service the company employed 1,503 horses, and had 282 cars in use.

The capital of the company was £145,000. This is a fair example of the utility and economical administration of the tramway system in Japan; the remaining lines are shown in tabular form on the preceding page.

Statistics for the years since 1894 show that in 1899 there was a sudden increase in the number of companies formed and capital invested, and also in the number of miles run by the cars, whilst the number of passengers carried was almost precisely the same as in the previous year.

In other words, in 1899 the passengers travelled farther at a proportionately increased fare, swelling the receipts of the companies accordingly. The profits were enhanced in a corresponding ratio, but the dividends, of course, were payable upon a considerably augmented aggregate capital. The margin was sufficient, however, in most cases to fully satisfy the shareholders, and tramways not only prosper in Japan, but are exceptionally well adapted to the opening up of a country in which the lack of good cross-country roads has always to a certain extent retarded progress. Light railways, in combination with tramways, appear to present a solution of a problem that has greatly vexed Japan hitherto, and there should eventually be no lack of capital forthcoming for the prosecution of such enterprises.

SECTION VI.

PHYSICAL CONDITIONS.

THE Japanese Empire contains $161,159\frac{1}{2}$ square miles of territory, and comprises 604 islands (not counting the uninhabited islets, mere rocks, which are often made to swell the total to three thousand or so), extending from $119^{\circ} 20'$ to $156^{\circ} 32'$ of East Longitude, and from $21^{\circ} 48'$ to $50^{\circ} 56'$ of North Latitude.

The origin of the islands is evidently volcanic, and volcanoes are still numerous.

The four principal islands are traversed by a chain of mountains which culminate in the extinct volcano Fujiyama, some sixty miles south of Tokio (formerly Yedo), at a height of 12,230 feet.

On account of its mountainous character only about one-sixth of the country is capable of cultivation, but the hillsides are clothed with forests, and the climate, though it greatly varies, is on the whole favourable to Europeans.

The mean temperatures at seventeen observing stations, selected from among seventy-six stations maintained by the Japanese Meteorological Department, are given in the table on p. 127.

July or August, in fifteen cases out of seventeen, is the hottest month, and January is almost everywhere the coldest.

It will be noted that these stations have been so chosen as to present examples of the utmost variations that are to be encountered in the Japanese climate. Nemuro is on the extreme east of Yeso, and Goshun, otherwise Hengchung, is at the southern extremity of Formosa, so that provision has been made for observations both in the far north and the extreme south. The mean annual temperature indicates a difference between the two points named of 33° Fahrenheit.

The other stations are equally well placed. Naba is on the

largest of the Loochoo Islands—in the track, as it were, of the typhoons. Kagoshima comes next, at the southern end of Kiushiu; Kochi is on the south side of the island of Shikoku, facing the Pacific; Kanasawa is on the west coast, facing Korea; Nagano is on high ground in Central Nippon; Akita is a port on its north-west coast towards Yezo; and Ishinomaki, in part the scene of the tidal wave disaster of 1896, is close to the Pacific on the north-east of

Stations.	Mean Normal Tempera- ture.	Maxi- mum 1899. Fahr.	Date.	Mini- mum 1899. Fahr.	Date.
Hokoto, Pescadores Islands - - -	71·8°	91·4°	16 vii.	50°	4 ii.
Goshun, Formosa - -	75·4	90·6	17 v.	49·7	4 ii.
Daihoku, <i>i.e.</i> , Taipei, Formosa - - -	70·6	97·2	9 vii.	45	29 i.
Naba, Loochoo Islands	71·4	90·6	30 vi.	45·8	10 ii.
Kagoshima, Satsuma (Kiushiu) - -	61·8	88·6	{ 5 } vii. 15	26	16 i.
Kochi, Tosa (Shikoku)	60	89·3	7 viii.	24	16 i.
Osaka - - -	59	93·8	7 vii.	26	16 i.
Nagasaki - - -	59·7	90·7	6 vii.	24·8	15 i.
Shimonoseki - -	59·8	93·4	27 viii.	26	15 i.
Sakai, near Osaka -	58	91·2	26 viii.	26·1	15 i.
Tokio - - -	56·8	93·4	16 viii.	21·4	23 i.
Kanasawa, Kaga (west coast) - - -	56·2	95·2	27 viii.	23	15 i.
Nagano, West Nippon	51·8	93·2	12 viii.	11·3	18 i.
Akita, North-West Nippon - - -	51·5	92·1	28 viii.	5	25 i.
Ishinomaki, Sendai Bay	51·8	89·8	24 viii.	18·7	15 i.
Hakodate, Yezo - -	46·8	83·3	29 viii.	2	21 i.
Nemuro, Yezo - -	42·4	76·2	30 viii.	11·6	13 ii.

Nippon. Some stations are in elevated positions; some are at the sea-level; most of them are on the coast, but two are well inland. As regards latitude, the seventeen stations fall within zones as follows: Hokoto, Goshun, and Daihoku are between 22° and 25° north latitude; Naba is approximately in 26°; Kagoshima, Kochi, Nagasaki, and Shimonoseki, are between 31° and 34°; Osaka and Sakai are between 34° and 35°; Tokio, Nagano, and Kanasawa, lie

between 35° and 37°; Akita and Ishinomaki between 38° and 40°; and Hakodate and Nemuro between 41° and 44°. Each belt has its set of observing stations, and the records furnished by them enable meteorologists to form very accurate estimates of the character of the Japanese climate.

All the foregoing seventeen stations are so situated that the thermometers are within 150 feet of sea-level, save Nagano, where the apparatus is at a height of 1,375 feet above the sea; Nagasaki, where the observatory stands at an elevation of 370 feet; and Kagoshima, where it is at 391 feet.

An observing station stands 2,345 feet above sea-level at Ashio, on the slopes of the Nantaizan range, near Nikko, but this station is not included in the preceding list of average temperatures.

Subjoined is a statement of the annual rain and snow fall at the seventeen stations named.

Inches.				Inches.			
Hokoto ...	...	...	35	Shimonoseki ...	...	...	52
Goshun ...	...	...	83	Sakai ...	...	...	79
Daihoku ...	...	...	76	Tokio ...	...	...	65
Naba ...	...	...	88	Kanasawa ...	...	...	103
Kagoshima ...	...	...	76	Nagano ...	...	...	41
Kochi ...	...	...	134	Akita ...	...	...	77
Osaka ...	...	...	64	Ishinomaki ...	...	...	51
Nagasaki ...	...	...	72	Hakodate ...	...	...	57
Nemuro ...	...	...	31				

SECTION VII.

TARIFF AND CUSTOMS REGULATIONS.

RATES OF DUTY ESTABLISHED BY GENERAL TARIFF

DUTIABLE ARTICLES.	Rates of Duty per cent. Ad valorem.
GROUP I.—Arms, Clocks, Watches, Scientific Instruments, and Machinery:	
Balances and measuring scales and tapes ...	10
Barometers	10
Binocular glasses—	
(a) Covered with leather, or japanned ...	15
(b) All other kinds	20
Cannon, muskets, pistols, side-arms, projectiles, cartridges, and other arms	25
Clocks, and parts of	20
Compasses and chronometers (for navigation) and parts thereof	10
Crucibles, all kinds of	10
Cutlery (not otherwise specified)	20
Diving apparatus and parts of	10
Electric light machinery and parts of	10
Fire-engines and parts of	10
Implements, agricultural, and artisans' tools, and parts of	5
Instruments, philosophical, chemical, drawing, sur- veying, surgical, and all other scientific instru- ments (not otherwise specified)	10

DUTIABLE ARTICLES.				Rates of Duty per cent. Ad valorem.
GROUP I. (<i>continued</i>).				
Locomotive engines and parts of	...	...	...	10
Machines and machinery of all kinds and parts thereof (not otherwise specified)	...	...	...	10
Microscopes and parts of	...	...	...	10
Musical instruments and accessories	...	...	...	15
Phonographs and parts of	...	...	...	25
Photographic instruments and apparatus and parts of	...	...	...	15
Pumps and parts of	...	...	...	10
Sewing-machines and parts of	...	...	...	10
Spectacles and parts of	...	...	...	10
Sporting guns and parts thereof	...	...	...	25
Steam boilers, engines, and parts of	...	...	...	10
Telephones and parts of	...	...	...	10
Telescopes	...	...	...	10
Thermometers	...	...	...	10
Typewriters	...	...	...	10
Watches, watch-cases, and accessories—				
(a) Of gold or platinum	...	...	...	30
(b) Of silver or other metal	...	...	...	25
Watch movements and fittings	...	...	...	15
GROUP II.— <i>Beverages and Comestibles</i> :				
Biscuits—				
(a) Ships' biscuits	...	...	...	10
(b) Fancy biscuits	...	...	...	15
Butter	...	...	...	15
Cheese	...	...	...	15
Coffee	...	...	...	20
Confectionery and sweetmeats	...	...	...	25
Eggs, fresh	...	...	...	10
Flour and meal of all cereals, and starch	...	...	...	10
Fresh meat	...	...	...	10
Fruit, fresh or dried, and nuts, not other- wise specified	...	...	...	15
Ham and bacon	...	...	...	15

DUTIABLE ARTICLES.				Rates of Duty per cent. Ad valorem.
GROUP II. (<i>continued</i>).				
Milk, condensed or desiccated	...	...	...	15
Mineral water, lemonade, soda-water, and other non-alcoholic beverages	...	...	...	10
Pepper	...	...	...	15
Salt, sea or rock—				
(a) Crude	...	...	...	10
(b) Refined	...	...	...	15
Salt fish	...	...	...	15
Salted meat	...	...	...	10
Sekikwasai (gelidium corneum)	...	...	...	10
Tea	...	...	...	25
Vegetables, green, dry, or salted	...	...	...	10
All other comestibles	...	...	...	15

GROUP III.—*Clothing and Accessories:*

Boots and shoes (all kinds of)	...	...	...	20
Braces and suspenders—				
(a) Entirely or partly of silk	...	...	...	25
(b) All other kinds	...	...	...	20
Comforters, neckerchiefs or mufflers—				
(a) Entirely or partly of silk	...	...	...	25
(b) All other kinds	...	...	...	20
Gloves (all kinds of)	...	...	...	20
Hats, caps, and bonnets—				
(a) Ornamented with gold, silver, or gems	...	...	...	30
(b) Entirely or partly of silk	...	...	...	25
(c) All other kinds	...	...	...	20
Scarves and neckties—				
(a) Entirely or partly of silk	...	...	...	25
(b) All other kinds	...	...	...	20
Shawls—				
(a) Woollen, embroidered, or entirely or partly of silk	...	...	...	25
(b) All other kinds	...	...	...	20
Shirts	...	...	...	20

DUTIABLE ARTICLES.

Rates of Duty
per cent.
Ad valorem.GROUP III. (*continued*).

Socks, hose, or stockings, knit—				
(a)	Of cotton, of wool, and cotton and wool mixed	...	...	20
(b)	Of silk, entirely or partly	...	...	25
(c)	All other kinds	...	...	20
Studs, and sleeve or cuff buttons, or links—				
(a)	Of gold or platinum, whether with or without gems, coral, pearls, etc.	...	...	30
(b)	All other kinds	...	...	25
Trimmings of all kinds, including braids, cords, ribbons, laces, fringes, gimps, tassels, knots, stars, metallic threads and braids, and all other kinds not otherwise specified—				
(a)	Entirely or partly of gold or silver	...	...	30
(b)	Entirely or partly of silk	...	...	25
(c)	All other kinds	...	...	20
Undershirts and drawers, knitted—				
(a)	Of cotton, wool, or mixed cotton and wool	...	...	20
(b)	Of silk, entirely or partly	...	...	25
(c)	All other kinds	...	...	20
Waterproof coats—				
(a)	Entirely or partly of silk	...	...	25
(b)	All other kinds	...	...	20
All other clothing and accessories—				
(a)	Entirely or partly of silk	...	...	25
(b)	All other kinds	...	...	20

GROUP IV.—*Drugs, Medicines, and Chemicals:*

Acid, carbolic	...	...	...	10
„ salicylic	...	...	...	10
„ tartaric	...	...	...	10
Alcohol	...	...	...	40
Alum	...	...	...	10
Antifebrine	...	...	...	16
Antipyrin	...	...	...	10

DUTIABLE ARTICLES.

Rates of Duty
per cent.
Ad valorem.GROUP IV. (*continued*).

Betel-nut	10
Bezoar, cow	10
Biakijutsu (radix atractylis ovata alba) ...	10
Bismuth, subnitrate of	10
Bleaching powder (chloride of lime, or calx chlorinata)	10
Borax (sodii biboras)	10
Camphor, Borneo and Blumea, or Ngai ...	10
Cassia, or cinnamon bark	10
" " oil	10
Cataria, leaf of	10
Cinchona bark	10
Cinchonine (muriate or sulphate of) ...	10
Cinnabar (hydrargyri sulphuretum rubrum) ...	10
Cloves (caryophyllus)	10
Cocaine hydrochloride	10
Cod-liver oil (oleum morrhue)	10
Collodion, photographic, with iodizer ...	10
Cutch and gambier (extractum catechu nigrum and extractum terra Japonica, or catechu pallidum)	10
Gentian (radix gentiana)	10
Ginseng (panax)	10
Glycerine	10
Gum Arabic, or acacia	10
" benzoin, or benzoinum	10
" dragon's blood, or sanguis draconis ...	10
" myrrh, or myrrha	10
" olibanum	10
Hops	10
Iodoform	10
Ipecacuanha (radix ipecacuanhæ)	10
Jalap (radix jalapæ)	10
Lead, acetate, or sugar of	10
Liquorice (radix glycyrrhizæ)	10
Mawo (epedora vulgaris)	10

DUTIABLE ARTICLES.

Rates of Duty
per cent.
Ad valorem.

GROUP IV. (*continued*).

Manganese, black oxide of (manganesii oxidum nigrum)	10
Morphine, hydrochlorate or sulphate of (morphia hydrochloras or sulphas)	10
Musk (moschus)	15
„ artificial	15
Nard, or spikenard	10
Phosphorus, amorphous	10
Pilocarpine, hydrochlorate of (pilocarpina hydrochloras)	10
Potash, bromide of (potasii bromidum)	10
„ chlorate of (potasii chloras)	10
„ iodide of (potasii iodidum)	10
Putchuk	10
Quinine, hydrochlorate or sulphate of (quinia hydrochloras, or sulphas)	10
Radix Columba (Colombo)	10
Rhubarb, in lump or ground (radix rheum)	10
Rosin	10
Saffron (crocus)	10
Saltpetre (potasii nitras)	10
Santonine (santoninum)	10
Sarsaparilla (radix sarsæ)	10
Semencynæ, or wormseed (semen santonica)	10
Shellac	10
Soda ash	10
„ bicarbonate of (sodii bicarbonas)	10
„ caustic (sodii caustica)	10
„ crystals, washing soda	10
„ salicylate of (sodii salicylas)	10
Sojitsu (radix atractylus lancea)	10
Stick-lac	10
Vaseline	10
Wogon (radix scutellaria lanceolaria)	10
All other drugs, medicines, and chemicals	10

DUTIABLE ARTICLES.

Rates of Duty
per cent.
Ad valorem.GROUP V.—*Dyes, Colours, and Paints :*

Alizarine dyes	...	...	...	...	10
Aniline dyes	...	...	...	...	10
Blue mineral (dry or liquid)	...	...	...	...	10
Carmine	...	...	...	...	10
Cobalt, oxide of	...	...	...	...	10
Cochineal	...	...	...	...	10
Emerald green	...	...	...	...	10
Galls of all kinds	...	...	...	...	10
Gamboge	...	...	...	...	10
Gold, silver, or platinum, liquid	...	...	...	...	15
Indigo, dry	...	...	...	...	10
„ liquid	...	...	...	...	10
„ extract and Indigo carmine	...	...	...	...	10
Lead (all colours)	...	...	...	...	10
Logwood, chips	...	...	...	...	10
„ extract of	...	...	...	...	10
Mangrove bark	...	...	...	...	10
Paint in oil	...	...	...	...	10
Safflower	...	...	...	...	10
Sapan wood	...	...	...	...	10
Smalt	...	...	...	...	10
Turmeric	...	...	...	...	10
Ultramarine	...	...	...	...	10
Varnish	...	...	...	...	10
„ Chinese	...	...	...	...	10
Verdigris	...	...	...	...	10
Vermilion	...	...	...	...	10
Wansho or Gosu	...	...	...	...	10
White zinc	...	...	...	...	10
All other dyes, colours, and paints	...	...	...	...	10

GROUP VI.—*Glass and Glass Manufactures :*

Glass, window (ordinary)—

(a) Uncoloured and unstained	...	...	10
(b) All others	...	...	15
Glass, plate (silvered or unsilvered)	...	...	20

DUTIABLE ARTICLES.					Rates of Duty per cent. Ad valorem.
GROUP VI. (<i>continued</i>).					
Glass beads, known as Venetian beads	...	...	...	...	20
„ broken or powdered	...	...	...	...	5
„ looking	...	...	...	...	25
„ all other manufactures of (not otherwise provided for)	...	...	...	...	20
GROUP VII.— <i>Grain and Seeds :</i>					
Barley	...	...	...	...	5
Beans and peas	...	...	...	...	5
Indian corn	...	...	...	...	5
Oats	...	...	...	...	5
Sesame, or sesamum	...	...	...	...	5
Wheat	...	...	...	...	5
All other grains and seeds not otherwise provided for					5
GROUP VIII.— <i>Horns, Ivory, Skins, Hair, Shells, etc. :</i>					
Bones, animal	...	...	...	...	5
Feathers and downs, all kinds	...	...	...	...	25
Furs, dressed or otherwise	...	...	...	...	25
Hair, animal (excluding wool, goats' hair and camels' hair)	...	...	...	...	5
Hair, human	...	...	...	...	20
Hides or skins, bull, ox, cow, and buffalo (raw, dried, salted or pickled, and undressed)	...	...	...	...	5
Hides or skins, deer (raw, dried, salted or pickled, and undressed)	...	...	...	...	5
Hides or skins, sambar (cervus elaphus) (raw, dried, salted or pickled, and undressed)	...	...	...	...	5
Hoofs	...	...	...	...	5
Horns, bull, ox, cow, and buffalo	...	...	...	...	5
„ deer	...	...	...	...	5
„ rhinoceros	...	...	...	...	10
Ivory or tusks, elephant	...	...	...	...	10
Ivory or tusks, elephant (waste)	...	...	...	...	10
„ narwhal or unicorn	...	...	...	...	10
„ walrus or sea-horse	...	...	...	...	10

DUTIABLE ARTICLES					Rates of Duty per cent. Ad valorem.
GROUP VIII. (<i>continued</i>).					
Leather, sole	...	...	...	...	15
„ all other	...	...	...	...	15
Tortoise-shell	...	...	...	...	15
„ waste	...	...	...	...	15
All other bones, horns, raw hides or skins, and shells of animals	...	...	...	...	5
All other tusks or teeth of animals	...	...	...	...	10

GROUP IX.—*Metals and Metal Manufactures :*

Antimony (ingot and slab)	...	...	...	...	5
Brass, bar, rod, plate, and sheet	...	...	...	...	10
„ pipes and tubes	...	...	...	...	10
„ screws	...	...	...	...	10
„ old (only fit for remanufacturing)	...	...	...	...	5
Copper (ingot and slab)	...	...	...	...	5
„ bar, rod, plate, and sheet	...	...	...	...	10
„ nails	...	...	...	...	10
„ pipes and tubes	...	...	...	...	10
„ wire	...	...	...	...	10
„ coins and nickel coins	...	...	...	...	5
„ old (only fit for remanufacturing)	...	...	...	...	5
German silver (sheet, plate, rod, and wire)	...	...	...	...	10
Iron and mild steel—					
Pig and ingot	...	...	...	...	5
Kentledges	...	...	...	...	5
Bar, rod, hoop and band	...	...	...	...	10
T, angle, and other similar wrought-iron and mild steel	...	...	...	...	10
Rails, and bolts and nuts, chairs, dog-spikes, and fish-plates thereof	...	...	...	...	10
Sheet and plate (plain or corrugated)	...	...	...	...	10
Galvanized sheet and plate (plain or corru- gated)	...	...	...	...	10
Plate (diagonal or checkered)	...	...	...	...	10
Pipes and tubes	...	...	...	...	10

DUTIABLE ARTICLES.					Rates of Duty per cent. Ad valorem.
GROUP IX. (<i>continued</i>).					
Nails, plain or galvanized (not otherwise provided for)					10
Screws, bolts, and nuts (not otherwise provided for)					10
Tinned plates (plain, crystallized, or laminated)					10
Wire and small rod, not exceeding $\frac{1}{4}$ inch in diameter (plain or tinned)					10
Telegraph wire (galvanized)					10
Wire rope (plain or galvanized)					10
„ old (plain or galvanized)					5
Old hoops, old wire, and other old iron and mild steel, only fit for remanufacturing					5
Lead—					
Pig, ingot, and slab					5
Sheet					10
Pipes and tubes					10
Mercury					5
Nickel					5
Platinum—					
Block					10
Bar, rod, sheet, and wire					10
Solder (all kinds)					5
Steel (other than mild steel)—					
Pig and ingot					5
Bar, rod, plate, and sheet					10
Pipes and tubes					10
Wire and small rod, not exceeding $\frac{1}{4}$ inch in diameter					10
Wire (for umbrella ribs)					10
Wire rope (plain or galvanized)					10
Old files and other old steel (only fit for remanufacturing)					5
Tin—					
Block, pig, and slab					5
Plate					10
White metal, Babbitt's					5

DUTIABLE ARTICLES.

Rates of Duty
per cent.
Ad valorem.

GROUP IX. (*continued*).

Yellow metal or Muntz metal—

Sheet and plate	...	...	...	...	10
Rod and bar	...	...	...	...	10
Nails	...	...	...	...	10
Pipes and tubes	...	...	...	...	10
Old yellow metal (only fit for remanufacturing)					5

Zinc—

Block, pig, and slab	...	...	...	...	5
Sheet	...	...	...	...	10
Old sheet and other old zinc (only fit for remanufacturing)	...	...	...	...	5
Anchors and chain cables (new or old)	...	...	...	...	10
Bag frames	...	...	...	...	15
Capsules (for bottles)	...	...	...	...	15
Chains, iron (not otherwise provided for)	...	...	...	...	15
Door-locks, knobs, bolts, hinges, etc.	...	...	...	...	15
Foils and powder of gold, silver, and other metals	...	...	...	...	15
Gold and silver ware (not otherwise provided for)	...	...	...	...	15
Gold and silver plate ware (not otherwise provided for)	...	...	...	...	25
Grates, fenders, stoves, and fittings thereof	...	...	...	...	20
Nails and screws (not otherwise provided for)	...	...	...	...	10
Safes and cash-boxes	...	...	...	...	20
Umbrella ribs and furniture thereof	...	...	...	...	15
All other metals, unmanufactured or old (not otherwise provided for)	...	...	...	...	5
All other manufactures of metal or metals not otherwise provided for	...	...	...	...	20

GROUP X.—*Oil and Wax* :

Candles	...	...	...	...	15
Gasoline	...	...	...	...	10
Oil, bean, and pea	...	...	...	...	10
„ castor	...	...	...	...	10
„ cocoanut	...	...	...	...	10
„ ground-nut	...	...	...	...	10

DUTIABLE ARTICLES.					Rates of Duty per cent. Ad valorem.
GROUP X. (<i>continued</i>).					
Oil, kerosene	...	...	...	...	10
„ linseed	...	...	...	...	10
„ olive	...	...	...	...	10
„ palm	...	...	...	...	10
„ paraffin	...	...	...	...	10
Spirit of turpentine	...	...	...	...	10
Wax, Chinese white	...	...	...	...	10
„ paraffin	...	...	...	...	10
All other oil and waxes	...	...	...	...	10
GROUP XI.— <i>Paper and Stationery :</i>					
Albums (photographic and postage stamp)	...	...	...	...	25
Books, blank, or printed blank, and printed blank forms	...	...	...	...	15
Ink, printing, copying, writing, and lithographic	...	...	...	...	15
Paper, Chinese, all kinds	...	...	...	...	15
„ hanging	...	...	...	...	15
„ printing	...	...	...	...	15
„ all other	...	...	...	...	15
Pencils—					
(a) In gold or platinum	...	...	...	...	30
(b) All others	...	...	...	...	15
Pen nibs—					
(a) Gold	...	...	...	...	30
(b) All others	...	...	...	...	15
Sealing-wax	...	...	...	...	15
Straw boards	...	...	...	...	15
All other stationery	...	...	...	...	15
GROUP XII.— <i>Sugar :</i>					
Sugar	...	...	...	...	5
„ refined	...	...	...	...	20
„ rock, candy	...	...	...	...	25
Molasses	...	...	...	...	10
Syrup	...	...	...	...	10

DUTIABLE ARTICLES.

Rates of Duty
per cent.
Ad valorem.

GROUP XIII.—*Tissues, Yarns, Threads, and Materials thereof :*

No. 1—

Cotton yarn, for weaving purposes	...	...	10
„ thread, for sewing purposes	...	...	15
Bookbinders' cloth	...	...	15
Cotton damasks	...	...	15
„ drills	...	...	15
„ ducks	...	...	15
„ prints and chintzes	...	...	15
„ satins, brocades, Italians, and figured shirtings	...	...	15
Cotton velvets or velveteens	...	...	15
Ginghams	...	...	15
Shirtings, gray	...	...	15
„ white or bleached	...	...	15
„ twilled	...	...	15
„ dyed	...	...	15
Taffachelaes	...	...	15
T cloth (shirting or narrow width)	...	...	15
Turkey-red cambrics	...	...	15
Victoria lawns	...	...	15
All other cotton tissues (of cotton, wholly or in part, the cotton in the latter case, however, predominating in weight)	...	...	15

No. 2—

Woollen and worsted yarns (all kinds)	...	10
Alpaca	...	15
Balzarine	...	15
Buntings	...	15
Camlets, lastings, and crape lastings	...	15
Camlet cords	...	15
China figures	...	15
Flannel (wholly of wool, or of wool and cotton)	...	15
Italian cloths	...	15
Long ells	...	15

DUTIABLE ARTICLES.

Rates of Duty
per cent.
Ad valorem.

GROUP XIII. (*continued*).

Mousseline de laine (of wool or of wool and cotton)	15
Orleans and lustres	15
Serges	15
Spanish stripes	15
Woollen cloths, all kinds	15
(Partly of woollen or worsted yarn, and partly of cotton yarn, such as pilot, president, and union cloth)	15
Woollen damask	15
„ felt	15
All other woollen tissues (of wool, wholly or in part, the wool in the latter case, however, predominating in weight)	15

No. 3—

Silk, raw, thread, 'tama,' 'noshi,' waste, and raw silk of wild cocoons	15
Silk, floss	15
Silk, spun, for weaving purposes, and thread partly of silk	15
Silk threads (not otherwise provided for)	20
Crape, Chinese	20
Silk pongee, Chinese	20
Silk satins, Chinese	20
Silk-figured satins, Chinese	20
Silk-faced cotton satins*	20
Silk or silk and cotton tissues, embroidered	25
All other silk tissues (of silk, wholly or in part, the silk in the latter case, however, predominating in weight)	20

* Silk-faced cotton satins : all other mixed goods of cotton and silk, or of wool and silk, in which the cotton or wool predominate in weight, pay 15 per cent. *ad valorem*. The 10 per cent. rate is fixed by the Treaty with France for 'silk satins and satins of silk and cotton mixed,' the rate mentioned in the British and German Treaties for 'silk-faced cotton satins' being 15 per cent. *ad valorem*.

DUTIABLE ARTICLES.

Rates of Duty
per cent.
Ad valorem.

GROUP XIII. (*continued*).

No. 4—

Flax yarn, for weaving purposes	...	...	10
„ threads, for sewing purposes	...	...	15
Canvas	...	...	15
Linen (gray, white, dyed, or printed)	...	...	15
„ damasks	...	...	15
All other linens (of flax, wholly or in part, the flax in the latter case, however, predominating in weight)	...	...	15

No. 5—

Blankets of all kinds, singly or in piece	...	...	15
Carpets of carpeting, Brussels	...	...	20
„ „ felt	...	...	20
„ „ hemp or jute	...	...	20
„ „ patent tapestry	...	...	20
„ „ all other	...	...	20
Chikufu	...	...	15
Curtains—			
(a) Of silk, wholly or in part	...	...	25
(b) All others	...	...	20
Elastic boot webbing—			
(a) Of silk in part	...	...	20
(b) All others	...	...	15
Elastic braids or cords	...	...	15
Handkerchiefs—			
(a) Of cotton, linen, or of linen and cotton (singly or in piece)	...	...	15
(b) Of silk or lace	...	...	25
Mosquito nets, all kinds	...	...	20
Leather cloths (for furniture, etc.)	...	...	15
Oil cloths and linoleum cloths (for floor)	...	...	15
Table cloths or covers—			
(a) Of silk, wholly or in part	...	...	25
(b) All others	...	...	20
Towels (all kinds, singly or in piece)	...	...	15

DUTIABLE ARTICLES.				Rates of Duty per cent. Ad valorem.
GROUP XIII. (<i>continued</i>).				
Travelling-rugs (singly or in piece)—				
(a) Of silk in part	...	...	...	25
(b) All others	...	...	...	15
Twine of cotton or of hemp, flax, jute, Manila hemp, or China grass				
...	...	...	...	10
Yarns and threads (all kinds not otherwise pro- vided for)				
...	...	...	...	15
All other plain tissues	...	...	...	15
All other finished tissues—				
(a) Of silk, wholly or in part	...	...	...	25
(b) All others	...	...	...	20
GROUP XIV.— <i>Tobacco :</i>				
Cigars and cigarettes	...	...	...	40
Cigarettes rolled in paper	...	...	...	40
Snuff	...	...	...	40
Tobacco, cut	...	...	...	40
„ leaf	...	...	...	35
„ * all other prepared	...	...	...	40
GROUP XV.— <i>Wines, Liquors, and Spirits :</i>				
Beer, ale, porter, and stout	...	...	...	25
Brandy	...	...	...	40
Champagne	...	...	...	35
Chinese liquors, all kinds	...	...	...	40
Gin	...	...	...	40
Liqueurs, all kinds	...	...	...	40
Port	...	...	...	35
Rum	...	...	...	40
Saké (similar to that made in Japan)	...	...	...	40
Sherry	...	...	...	35
Vermuth	...	...	...	35
Whisky	...	...	...	40
Wines (red or white)	...	...	...	35
Spirits or distilled liquors of all other kinds	...	...	...	40
Wines or fermented liquors of all other kinds	...	...	...	35

DUTIABLE ARTICLES.					Rates of Duty per cent. Ad valorem.
GROUP XVI.— <i>Miscellaneous:</i>					
Aloes-wood	...	...	...	...	10
Amber—					
(a) Unwrought	...	...	...	...	10
(b) Wrought	...	...	...	...	20
Animals: Cattle, horse, ass, mule, sheep, goat,					
fowl	...	...	...	...	5
,, all others	...	...	...	...	10
Asbestos (in sheet or board)	...	...	...	...	10
Bamboo (unwrought)	...	...	...	...	5
Beltings of leather, caoutchouc, or canvas (for machinery)	...	...	...	...	10
Billiard tables and accessories	...	...	...	...	30
Blasting gelatine and similar explosives, detonators, and fuses	...	...	...	...	15
Bricks and tiles (for building purposes)	...	...	...	...	10
Brushes and brooms (all kinds)	...	...	...	...	20
Canes, sticks, and whips	...	...	...	...	20
Caoutchouc and guttapercha—					
(a) Crude	...	...	...	...	5
(b) Sheet	...	...	...	...	10
(c) Manufactures of, not otherwise provided for	...	...	...	...	20
Carriages, bicycles, tricycles, and parts thereof	...	...	...	...	25
Cars or carriages, railway passenger, and parts thereof	...	...	...	...	10
Cars or waggons, railway freight, and parts thereof	...	...	...	...	10
Cars or carriages, tramway, and parts thereof	...	...	...	...	10
Cars or drays for conveyance of goods	...	...	...	...	10
Celluloid—					
(a) In sheet or rod	...	...	...	...	10
(b) Wrought	...	...	...	...	20
Cement, Portland	...	...	...	...	5
Chalk and Whiting	...	...	...	...	5
Charcoal, wood and animal	...	...	...	...	5
Clay (all kinds)	...	...	...	...	5
Coal and coal in brick	...	...	...	...	15
Coke	...	...	...	...	15

DUTIABLE ARTICLES.					Rates of Duty per cent. Ad valorem.
GROUP XVI. (<i>continued</i>).					
Coral (wrought or otherwise) ...	...	...	...	...	30
Cordage and ropes of flax, hemp, jute, Manila hemp, or China grass (for rigging purposes) ...	...	...	...	...	10
Cork bark ...	..	...	...	...	5
Corks ...	...	...	...	...	10
Diamonds (glaziers')	...	...	...	...	10
Dynamite ...	...	...	...	...	15
Emery sands ...	...	...	...	...	5
„ cloth or paper, and sand-paper ...	...	...	...	...	5
„ wheels, and all kinds of grindstones ...	...	...	...	...	5
Felt for ships' bottoms or for roofing ...	...	...	...	...	10
Fireworks (all kinds) ...	...	...	...	...	30
Fishing-gut (tegusu) ...	...	...	...	...	5
Flints ...	...	...	...	...	5
Flowers, artificial ...	...	...	...	...	25
Frames for pictures and mouldings ...	...	...	...	...	20
Funori (<i>gleopeltis intricata</i>) ...	...	...	...	...	5
Furniture, new or old (not otherwise provided for)	...	...	...	...	20
Games, all articles of, used in tennis, cricket, chess, etc. (not otherwise provided for) ...	...	...	...	...	25
Glue, common ...	...	...	...	...	5
Guncotton... ..	...	...	...	...	15
Gunpowder (all kinds) ...	...	...	...	...	15
Gypsum ...	...	...	...	...	5
Hay ...	...	...	...	...	5
Ivory, manufactures of (not otherwise provided for)	...	...	...	...	20
Jewellery (set with precious stones, pearls, etc., or otherwise) ...	...	...	...	...	35
Jewellery, imitation (set with precious stones, pearls, etc., or otherwise) ...	...	...	...	...	30
Labels (bottles, tin, etc.) ...	...	...	...	...	15
Lamps, lanterns, and parts thereof ...	...	...	...	...	20
Lard, tallow, and grease ...	...	...	...	...	10
Leather, manufactures of (not otherwise provided for) ...	...	...	...	...	20
Malt ...	...	...	...	...	5

DUTIABLE ARTICLES.				Rates of Duty per cent. Ad valorem.
GROUP XVI. (<i>continued</i>).				
Matches (all kinds) ...	...	...	...	20
Mattings, China (in rolls of 40 yards) ...	...	...	...	20
„ cocoa ...	...	...	...	20
Mats and mattings, all other ...	...	...	...	20
Mica (in sheets) ...	...	...	...	10
Oakum ....	...	...	...	5
Packing, for steam-engines ...	...	...	...	10
Paintings, in oil or water-colour, lithographs, chromo-lithographs, photographs, hojo, and all other pictures not otherwise provided for ...	...	...	...	25
Pitch, wood-tar, and coal-tar ...	...	...	...	5
Plaster of Paris ...	...	...	...	5
Playing cards (all kinds) ...	...	...	...	35
Plumbago or black-lead ...	...	...	...	5
Porcelain and earthenware (not otherwise provided for) ...	...	...	...	20
Precious stones and pearls ...	...	...	...	35
„ „ „ (imitation) ..	...	...	...	30
Pulp (for making paper) ...	...	...	...	5
Putty ...	...	...	...	5
Rattans (split or otherwise) ...	...	...	...	5
Saddles, bridles, and harness ...	...	...	...	25
Sandal-wood ...	...	...	...	10
Shoe-blackening (all kinds) ...	...	...	...	20
Smokers' articles (articles used in smoking, opium excepted) ...	...	...	...	30
Soap—				
(a) Toilet ...	...	...	...	20
(b) All other ...	...	...	...	10
Soapstone, in lump or powder ...	...	...	...	5
Sparterie (for hat manufacture) ...	...	...	...	10
Sponges ...	...	...	...	5
Stones and slate (not otherwise provided for)—				
(a) Rough or unwrought (for building purposes, etc.) ...	...	...	...	5

DUTIABLE ARTICLES.					Rates of Duty per cent. Ad valorem.
GROUP XVI. (<i>continued</i>).					
(b) Wrought for ornamental works, furniture, etc.					20
(c) Statues, and other sculptured or engraved works					25
Submarine cables and subterranean telegraph wires					10
Timber, santalum (shitan)					5
„ teak					5
Timbers, lumbers, boards, and planks of all kinds not otherwise provided for					5
Toilet or dressing-cases					25
„ perfumed water, hair-oil, toothwash, and all other cosmetics and perfumery					30
Tortoise-shells, manufactures of					25
Toys (all kinds)					25
Trunks, portmanteaux, travelling and courier bags					20
Umbrellas, parasols, and sunshades—					
(a) Of silk, wholly or in part					25
(b) All others					20
Umbrella sticks and handles (except those made of gold and silver)					20
Vessels, steam and sailing, and boats					5
Wares of santalum or ebony wood					25
All articles, raw or unmanufactured, not herein enumerated					10
All articles, manufactured, wholly or in part, not herein enumerated					20

DUTY-FREE ARTICLES.

Advertisements and signboards.

Animal bone ashes.

Atlases, maps and charts, and other scientific diagrams.

Bank-notes, coupons, scrips, and negotiable papers of all kinds.

Books (printed), including pamphlets, copy-books, journals, and periodicals.

Bullion, gold and silver.

Cocoons, all kinds.

Coins, gold and silver.

Cotton, old.

„ raw, ginned.

„ „ and seeds.

„ waste.

„ yarn waste.

Flax, hemp, jute, Manila hemp, and China grass (hackled or otherwise).

Guano.

Gunny-bags (new or old).

„ cloth.

Mats, packing.

Models, and architectural and engineering plans.

Oil-cake, in lump or powdered.

Opium, for medicinal purposes (imported by Imperial Government).

Plants, trees and shrubs, and roots, shoots, and bulbs thereof.

Rice and paddy.

Sardines ('iwashi'), dried.

Tea-firing baskets and sieves.

„ pans.

Tea-lead.

Wool, goats' hair, and camels' hair (new or old).

PROHIBITED ARTICLES.

Adulterated drugs, chemicals, medicines, foods, and beverages considered injurious by laws, ordinances, and regulations.

Articles used in smoking opium.

Articles considered by laws, ordinances, and regulations dangerous to public health or to plants and animals.

Articles in violation of the laws of the empire respecting patents, designs, trade-marks, and copyright.

False coins and imitations of coins which may be considered to be false coins.

• Opium (opium imported by Government for medicinal purposes excepted).

Books, pictures, engravings, and other articles injurious to public peace or morals.

SECTION VIII.

BOUNTIES AND SUBSIDIES.

A LAW for the encouragement of shipbuilding and navigation was promulgated in 1895, whereby the owners of iron or steel steamships of 1,000 tons and upwards, built under the supervision of the Ministry of Communications by a Japanese subject or company composed exclusively of Japanese subjects, and in other ways complying with the regulations, were entitled to receive from the Exchequer a sum in each case equal to £2 sterling per ton for the hull, plus 10s. per unit of horse-power employed in propulsion. It was a stipulation that no foreign material, save that specified by the Ministry of Communications, should be used in the building of such vessels. A smaller class of vessels, which it was foreseen would be required for the navigation of the Yang-tse-Kiang up to the cities of Ichang and Chung-King, where Japanese merchants were expected to settle, were to be granted 24s. per ton for the hulls. These bounties in the six years that have elapsed have been earned by three vessels of over 6,000 tons each, built at Nagasaki, and by some forty to fifty smaller steamers of varying tonnage, constructed either there or at other Japanese dockyards.

The navigation subsidies were to be granted to owners of vessels of 1,000 tons and upwards flying the Japanese flag, such vessels being the property of a Japanese subject or company composed exclusively of Japanese subjects, on compliance with the Government terms relative to naval transport. These terms were that to vessels of 1,000 tons, having a minimum speed of ten knots, £2 10s. per thousand knots run should be given per voyage, with 10 per cent. additional for every 500 tons additional displacement, and 20 per cent. per knot for speed above ten knots. Roughly, this worked out at some £200 per voyage on large vessels engaged in

such a journey as that to the Thames and back. This scheme, however, has not been applied to vessels engaged in the European trade, but only to vessels engaged in short voyages.

The bargain made with the shipowners was that the vessels should be available when requisitioned for public purposes on payment of a fair sum, that they should carry cadets at the owner's expense, that foreigners should not be employed on board without Ministerial sanction, and that mails and postal employes should be carried when required.

It was also a condition that the ships should not be more than fifteen years old, nor have been longer than five years in Japanese hands.

The subsidies were to be payable in full for the first five years only, and at a reduced rate for the next fifteen; but the ship might not be regarded as freed from liability to serve as a transport until twenty-three years in all should have elapsed.

Whatever effect these bounties and subsidies may in other respects have had, a great expansion of the Japanese Mercantile Marine has unquestionably followed their institution, as may be gathered from the subjoined figures.

JAPAN POSSESSED IN

Steamers.	1888.	1893.	1894.	1895.	1899.
Under 500 tons	178	308	335	373	549
500 to 1,000 „	19	36	39	41	56
1,000 „ 2,000 „	20	43	46	58	65
2,000 „ 3,000 „	10	11	29	40	47
3,000 „ 5,000 „	—	2	11	15	20
Over 5,000 „	—	—	1	1	16
	227	400	461	528	753
Total tonnage	92,398	167,496	263,929	331,374	498,376

The tonnage, it will be observed, has practically been doubled since the year 1894, when the war with China began.

Ten years ago, out of 352 steamers owned in Japan 245 were built entirely of wood, and only eleven were of steel. In 1899 500 were of wood, but 116 were of steel, and 123 of iron.

The Government has recently decided to inaugurate a line of policy, better calculated to render the vessels serviceable in national emergency, and at the same time to put a limit to the amount of subsidies granted.

Under the new arrangement the subsidies are to be continued during the ten years from 1900 to 1909 inclusive, and they are to be granted on the European Line, the Seattle Line, and the San Francisco Line, for the fixed time service. The subsidies are to be kept within the subjoined limits :

			£
On the European Line	...	...	267,389
„ Seattle Line	...	...	65,403
„ San Francisco Line	...	...	101,388

What will be the precise effect of this change it is, of course, impossible at the present time to judge. In principle the policy of stimulating Japanese shipping enterprise has undergone no alteration, and the object that has always been in view—viz., the extension of commercial lines of communication by all legitimate means—is still the goal.

SUBSIDIES TO STEAMSHIP LINES.

The sum of 880,000 yen, rather more than £89,000, was annually, for fifteen years prior to September, 1900, paid to the Nippon Yusen Kaisha (Japan Mail-boat Company), on condition of the company running regular lines of steamers between

Yokohama and Shanghai,	Kobé and Otaru (Yeso),
Kobé and Tientsin,	Yokohama and Yokkaichi,
Kobé and Newchwang,	Aomori and Mororan,
Kobé and Vladivostock,	

and other lines along the coast of Yeso.

Under the Government's new regulations the annual subsidy is £58,000 for five years, ending in September, 1905.

Small additional subsidies were granted for the Yeso coast-lines—viz. :

			Not more than £
For the Hakodate-Nemuro Line	...	...	4,526
„ Otaru-Wakanai Line	...	...	4,437
„ Nemuro-Abashiri Line	...	...	1,747
„ Nemuro-Etorofu Line	...	...	2,287

Furthermore, it was decided to subsidize a line of vessels trading on the Yang-tse-Kiang, and between Soochow, Shanghai and Hangchow. The sums payable during the financial year 1901-02 for these services amount to £35,701, distributed as follows :

	Per Annum.
	£
For the Shanghai-Hankow and Hankow- Ichang Lines	{ 1901-02 29,793 { 1902-07 36,233 { 1907-08 27,175
For the Shanghai-Soochow-Hangchow Line	{ 1901-03 5,908 { 1903-04 1,477

The grant of these subsidies carries with it certain conditions as to size and speed in the vessels to be employed.

On the European Line the rate of progress must not fall below thirteen knots for the whole voyage ; on the Seattle Line it must be maintained at fourteen knots minimum ; and on the service to San Francisco the contract speed is to be at least fifteen knots. Between Yokohama and Shanghai fourteen knots minimum is bargained for, twelve knots on the route between Kobe and North China and Kobe and Vladivostock, and ten knots on the line to and around the coast of Yezo and to Korea. The Shanghai route demands vessels of 2,500 tons, that to North China and Vladivostock 1,400 tons, and 2,000-ton ships, with eleven knots' speed, are required for the Yang-tse-Kiang.

SECTION IX.

FINANCES—THE NATIONAL CREDIT.

So much inaccurate information has been disseminated with regard to the financial condition of Japan that a brief statement concerning the empire's actual monetary position may not be out of place in this handbook. That the real situation may be fully comprehended a sketch of the nation's financial history since the Restoration, setting forth the main features of that long struggle with comparative poverty from which it has only since the dawn of the twentieth century safely emerged, must here be given, based upon the published figures of its Department of Finance.

At the Restoration, when the present Emperor of Japan ascended the throne in 1867, the monetary system in operation was nominally that instituted in the sixth year of the *Keicho* era, 1600 A.D. ; but the coinage had become debased, and not only had each province of the realm a considerable amount of paper-money in circulation, the use of which was entirely confined to the *Daimio's* territory, but the feudal princes occasionally took the liberty of manufacturing coin on their own account, and the currency system of the country generally was in a far from satisfactory condition. In 1871, the fourth year of the *Meiji* period, a New Coinage Law was promulgated, which paved the way for the final establishment of a gold standard.

In those days the universal medium of exchange in the Far East was the Mexican dollar, and the Government of the day thought that the interests of foreign trade would best be served by the issue of a 'trade dollar' precisely equal in size and quality to the Mexican, and by making it legal tender only within the limits of the 'Treaty Ports.' But it was found that gold coin was leaving the country at such a disastrous rate that in order to check the outflow and rid the

nation of the inconvenience resulting from the use of two kinds of money—one for foreign and the other for home trade—the Government made the trade dollar legal tender throughout the country, side by side with the gold coins. Thenceforward Japan had, until quite recently, a gold and silver bimetallic system. It was a retrograde step, in the opinion of many, but was prompted by dire financial strain. The Imperial Government, in abolishing the principalities, had been obliged to take over all the *Daimio's* paper-money, and to issue a large amount of paper currency of its own, raising the total of the inconvertible paper-money in circulation to a figure that was positively appalling.

The new paper-money, though issued by the State, was at a heavy discount, being shunned by the people, whose experience of the various inconvertible notes of feudal times had been discouraging. As a remedy, the Government offered to exchange its paper for bonds bearing 6 per cent. interest, and this step, added to the growing confidence of the nation in the newly-formed Central Government, had the effect of inducing a general acceptance of, and even a preference for, the *kinsatsu* (lit., gold note), as being more convenient to handle than weighty silver coins. Matters were progressing satisfactorily, when, unhappily, in 1877 the Satsuma Rebellion involved the Government in enormous expenditure, and compelled it once more to have recourse to the expedient of issuing a large amount of inconvertible paper. The inflation was followed as a matter of course by depreciation in the value of the notes. Prices rose rapidly, gold and silver left the country. Thus came about the great financial distress of 1880-81.

It became necessary, side by side with the redemption of a portion of the paper-money in circulation, to take steps to increase the specie reserve of the State preparatory to the resumption of specie payment. The Finance Minister of the day, Count Matsukata, likewise insisted upon the need of establishing a central State bank which alone should be empowered to issue notes. In June, 1882, the Bank of Japan was inaugurated, and two years later, in May, 1884, it was authorized to issue convertible paper.

These were the foundations, and upon them the Government endeavoured to raise a substantial superstructure. The strictest economy was enjoined upon every department; and by the end of 1885 the credit of the Government had risen so much that the dis-

parity in value between silver and paper had almost disappeared. The opportune moment seemed to have arrived, and the Government announced that specie payment would be resumed from January 1, 1886.

With the abolition of the evils that had attended the employment of an inconvertible paper currency, Japan became, *de facto*, a silver country, but the authorities always recognised that, sooner or later, Japan must adopt a gold standard.

Meanwhile she suffered severely from the sudden fall in silver, due partly to demonetization in Europe and in India, the greatest silver country in Asia. Fluctuations in foreign exchange were reflected in the unhealthy condition of the home and foreign trade of Japan. But the difficulty of accumulating a sufficient reserve for the establishment of gold monometallism seemed insuperable.

Quite unexpectedly, in 1895, the willingness of the Chinese to pay the war indemnity in pounds sterling afforded the Japanese Finance Minister the long-desired opportunity. In February, 1897, the Bill for effecting the reform was introduced into the Japanese Diet, and though some members argued that the adoption of a gold standard would tend to diminish the amount of Japanese exports to gold-standard countries, and others insisted that, as Japanese silver yen were held in foreign countries to the formidable extent of more than 100 millions, when these coins came back the Treasury would be swamped, the Government resolutely held on its way, and the Emperor's seal was affixed on March 29.

Bullion was bought discreetly, in a fashion calculated not to disturb the market, and 7½ million pounds' worth was conveyed to Japan, and converted into 5-yen, 10-yen, and 20-yen pieces at the Osaka Mint, in readiness for the coming change.

The total number of silver yen pieces coined at the Government Mint from the date of its opening had then been 165,133,710.

Of these it is estimated that 99,508,740 had been exported to foreign countries, and they never returned; 11,028,633 were taken abroad at the time of the war with China (1894-95); 5,732,027 were sent to Formosa after the cession of that island by China, and never brought in for exchange, having most likely been taken over to the Chinese mainland by Chinamen; 45,588,369 silver yen coins were exchanged for gold in Japan, of which 10,846,465 yen came back from abroad in the ten months ending July 31, 1898, and of the

remaining 3,275,941, only 460,904—which were recoined at the Mint into subsidiary coins—are accounted for, the other coins presumably having been lost or worn out. A few may have been taken away by foreign visitors when quitting the country.

The 99½ millions of coins which were never presented for exchange had been melted down, it was supposed, into 'sycee' by Chinese speculators. Some were being used in the Straits Settlements at a later date as a medium of exchange concurrently with the Mexican dollar.

The Government had to find a method of disposing of the silver coins that had been brought in, and of the silver bullion already sent in to the Mint and accepted for coinage. Therefore 27,567,012 silver yen pieces were recoined into subsidiary coins in 1898 and 1899; 40,786,662 yen coins were sold in Shanghai, Hong Kong, and elsewhere; and 6,740,148 were taken over to Formosa, Korea, and other places, and expended in those countries.

The usages in regard to monetary matters of the Chinese population of Formosa, and the close relationship in commerce that is maintained between Formosa and the adjacent Chinese province of Fo-Kien, effectually preclude for the time being the complete substitution of gold for silver as the standard in that part of the Japanese Empire. Gold is throughout the standard of value, but silver still circulates as legal tender at a given rate which is from time to time determined by the Government.

One excellent effect of the coinage reform is seen in the greater steadiness of the standard of exchange. The industrial classes in Japan no longer dwell in constant apprehension of disastrous fluctuations in the value of money. Trade with gold standard countries has been greatly facilitated by the establishment of a practically unvarying rate of exchange, which since October, 1897, has oscillated between 2s. 0·1611d. and 2s. 0·807d.—in other words, has never varied more at any time than three-fifths of a penny.

It is worthy of remark that the total cost of effecting this exchange to a gold standard barely exceeded half a million sterling, or, to be exact, 5,553,312 yen, and that it was fully counterbalanced by the manufacture profit obtained by the minting of subsidiary coins, in 1898 and 1899, from recovered yen pieces, already referred to.

At the time the coinage law was promulgated there were in circulation some 66,000,000 yen of the 1-yen convertible notes of

the Bank of Japan, which were being used by the people in their smaller daily transactions.

The Government issued 40,000,000 yen worth of various subsidiary coins, from $\frac{1}{2}$ -yen pieces downwards, and, in exchange for these, retired the 1-yen silver notes of the Bank of Japan. The entire realization of this plan means that the total amount of subsidiary coins in circulation—silver, nickel, and copper pieces—has reached the sum of 81,820,000 yen, practically four shillings per head of the population—a sum which is believed to be sufficient to meet the people's needs in the existing economic condition of Japan.

In comparison with other countries, the subsidiary silver coinage of Japan stands thus :

	Total.	Per Capita.	
	£	s.	d.
United States -	15,205,500	4	2
Great Britain -	24,413,000	12	4
France - - -	11,614,700	6	0
Germany - - -	23,590,600	9	0
Austria - - -	8,024,000	3	7
Russia - - -	8,405,100	1	$\frac{1}{2}$
Italy - - - -	5,315,900	3	5
Japan - - - -	8,182,000	4	0

The Coinage regulations provide that :

1. The power of minting and issuing coins belongs to the Government.
2. The weight of 2 fun of pure gold (1 fun = 5.78713 grains) is the unit of the coinage, and is called a yen.
3. The coins are of nine denominations, as follows :
 Gold : 20-yen, 10-yen,* and 5-yen pieces.
 Silver : 50-sen, 20-sen, and 10-sen pieces.
 Nickel : 5-sen pieces.
 Bronze : 1-sen and 5-rin ($\frac{1}{2}$ sen) pieces.

* The 10-yen piece is practically the equivalent of the British sovereign. Its weight is 128.599 grains ; that of the sovereign is 123.274 grains.

Under the Coinage Law of 1897 the coins which are now legal tender in Japan are thus defined :

STANDARD GOLD COINS.

20 yen = £2 0s. 10d.

Weight : 4·4444 mommé, or 16·6665 grammes.

Quality : 900 parts pure gold ; 100 parts copper.



10 yen = £1 0s. 5d.

Weight : 2·2222 mommé, or 8·3333 grammes.

Quality : 900 parts pure gold ; 100 parts copper.



5 yen = 10s. 2½d.

Weight : 1·1111 mommé, or 4·1666 grammes.

Quality : 900 parts pure gold ; 100 parts copper.



SUBSIDIARY SILVER COINS.

50 sen = 1s. 0¼d.

Weight : 3·5912 mommé, or 13·4783 grammes.

Quality : 80 per cent. pure silver, 20 per cent. copper.



20 sen = 5d.

Weight : 1·4377 mommé, or 5·3914 grammes.

Quality : 80 per cent. pure silver, 20 per cent. copper.





10 sen = $2\frac{1}{4}$ d.

Weight: 0.7188 mommé, or 2.6955 grammes.

Quality: 80 per cent. pure silver, 20 per cent. copper.

SUBSIDIARY NICKEL COINS.



5 sen = $1\frac{1}{4}$ d.

Weight: 1.2441 mommé, or 4.6654 grammes.

Quality: 25 per cent. nickel, 75 per cent. copper.

SUBSIDIARY BRONZE COINS.



1 sen = $\frac{1}{4}$ d.

Weight: 1.9 mommé, or 7.1280 grammes.

Quality: 950 parts copper, 40 parts tin, 10 parts zinc.



5 rin = $\frac{1}{8}$ d.

Weight: 0.9504 mommé, or 3.564 grammes.

Quality: 950 parts copper, 40 parts tin, 10 parts zinc.

The Imperial Mint at Osaka was established in 1868, the plant having been obtained from Hong Kong, after the British Government abolished its mint in that colony.

The first coinage regulations were enacted in 1871, and new coins of circular shape, instead of the oblong or oval coins employed in pre-Restoration days, were at once brought into use. The gold standard as already explained was established in 1897.

After several changes in the design of the silver pieces, those now in circulation take the form shown in these pages, the 1-yen silver.

coin, or Japanese dollar, having been withdrawn in 1897. It ceased to be legal tender on March 31, 1898.

The yen is the unit, but there is no actual yen coin in circulation. The decimal system is employed in calculations throughout, and the yen is equal to ten 10-sen pieces, the 10-sen piece is equal to ten 1-sen pieces, and the 1-sen piece is equal to 10 rin; but the coin of lowest denomination in existence is the 5-rin bronze piece, or half-sen.

The recognised equivalent of the Japanese yen is the sum of 2s. 0½d. in English money. In United States money one dollar is equal to 2.0062 yen.

AMOUNT IN CIRCULATION OF SPECIE AND PAPER.

The latest returns show that, on January 1, 1899, there were available in Japan :

	£
Gold coins, the equivalent of	8,364,865
Subsidiary silver pieces the equivalent of ...	4,581,414
" nickel " " " " " "	765,315
Old and new copper coins " " " "	933,903
	14,645,497
In paper-money :	
Government paper	541,172
Bank-notes	186,656
Convertible bank-notes	19,739,990
	20,467,818
Total of both specie and paper	35,113,315
Specie reserve for the convertible bank-notes :	
Gold coins	6,551,347
Amount in actual circulation after deducting the amount of specie reserve	28,561,968

SECTION X.

WEIGHTS AND MEASURES.

IN the year 1885 the Japanese Government joined the Universal Metric Convention, and in 1891 the present system of weights and measures was established throughout the empire. The old Japanese scale and foreign weights and measures, were alike superseded in that year.

The original standard is preserved at the Ministry of Commerce and Agriculture, and likewise one of the two duplicate standards. The other duplicate is in the custody of the Minister of Education. The Minister of Commerce and Agriculture authorizes local magistrates to make exact copies of the duplicate standard in his possession, that such copies may be utilized as local standards in the inspection of weights and measures.

The unit of lineal measurement is the shaku, equal to 11·93054 English inches.

The shaku is divided into tenths, termed sun, into hundredths, termed bu, into thousandths, termed rin, and into ten-thousandth parts, termed mo.

Ten shaku make one jo.

Here, however, the decimal system ceases to apply, and there is another measure of length termed ken, which is in universal use, one ken being the equivalent of six shaku. Sixty ken, or 360 shaku, constitute 1 cho, and 36 cho, make 1 ri, usually denominated the Japanese mile. One ri is, in reality, 12,960 shaku—roughly, 4,295 yards, or 2 miles and 775 yards.

Distances throughout Japan are commonly calculated by the ri.

The same designations are employed in square and cubic measurements as in linear, beginning with mo, and continuing with square or cubic rin, bu, sun and shaku up to square or cubic jo. The square ken, however, is termed a tsubo, and this is the unit of land

measurement in ordinary use. A tsubo is as nearly as possible 3·954 square yards.

The sé is the equivalent of 30 tsubo.

Ten sé equal 1 tan.

Ten tan equal 1 square cho, or 2·45 acres.

The tan is a much-used unit in agriculture, and is approximately one quarter of an acre.

In measures of capacity the unit is the sho, of a little more than 3 pints. Here the shaku is met with in another form. One shaku is the hundredth part of 1 sho, and the go is the equivalent of 10 shaku. Spirits are sold by the go or sho, and a go of *sho-chiu*—i.e., Japanese whisky—would be rather more than 1 gill. The to is the sho multiplied by 10, and the koku equals 10 to, or 39·7 gallons. In dry measure the koku equals 4·963 bushels.

In weights the unit is the kwan, of 1,000 mommé, the British equivalent of one kwan being 8·26733 lb. avoirdupois, or 10·047 lb. Troy. In the metrical system 1 kwan is equal to precisely 3,750 grammes. The smallest weight is also termed mo, and it is the thousandth part of a mommé, or the millionth part of a kwan. The rin is the equivalent of 10 mo, and 10 rin make 1 fun, as 10 fun make 1 mommé. The decimal system applies throughout in Japanese weights, save that there is a kin, in general use, which is the equivalent of 160 mommé. The kin is a close approach to the Chinese catty, and is almost equal to 1½ lb. of British weights. The exact figures are 1·32277 lb. to 1 kin. Moreover, 1 kin is exactly equal to 60 grammes.

The following metrical calculations are, in Japan, officially acknowledged as legal :

LENGTH.

	Metres.		Shaku.
The mo	= 0·00003	The millimetre	= 0·00330
„ rin	= 0·00030	„ centimetre	= 0·03300
„ bu	= 0·00303	„ decimetre	= 0·33000
„ sun	= 0·03030	„ metre	= 3·30000
„ shaku	= 0·30303	„ decametre	= 33·00000
„ jō	= 3·03030	„ hectametre	= 330·00000
„ ken	= 1·81818	„ kilometre	= 3300·00000
„ cho	= 109·09091		
„ ri	= 3927·27273		

AREA OF LAND.

	Are.		Bu, or Tsubo.
The shaku	= 0·00033	The centiare	= 0·30250
„ go	= 0·00331	„ are	= 30·25000
„ bu or tsubo	= 0·03306	„ hectare	= 3025·00000
„ sé	= 0·99174		
„ tan	= 9·91736		
„ cho	= 99·17355		

SECTION XI.

MINERAL RESOURCES.

THOUGH the mineral wealth of the Japanese Empire is considerable, the art of mining can scarcely be said to have reached a stage commensurate with that assured success which is observable in most other Japanese industries. There is, however, a steady growth in coal production, particularly in the islands of Kiushiu and Hokkaido (Yezo), and in the output of silver. The yield of copper and antimony continues to be large, and these metals figure extensively among Japan's exports, but the iron industry is still in its infancy, though the prospects of ultimate success upon a large scale are genuinely encouraging.

Take the output of Miiké coal, to begin with, as an example of the steady growth of the industry. In 1877 the export from the port of Kuchinotsu, whence Miiké coal was at that time shipped, was 409 tons. Half of this went to Shanghai, and the other half to Tientsin. In the ensuing year Shanghai took 7,512 tons, and in 1879 no less than 34,067 tons. By 1880 this export had been doubled, and a trade had sprung up with Hong Kong and Chefoo. In 1883 the Hong Kong buyers took over 15,000 tons, and doubled this in 1884. The total export had by that time attained to the satisfactory dimensions of 125,414 tons. Four years later it reached 217,302 tons, and a demand had been established for Miiké coal at Batavia, Rangoon, Singapore, and all the coast ports in China. The experiment has since been tried of exporting coal to San Francisco, Madras, Colombo, and Saigon, whilst Manila is now a recognised depot for this fuel.

The annual yield from the three mines at Miiké is close upon a million tons. The area of deposit as surveyed by the Japanese Government officials extends over 3,758 acres, containing 85,444,000 tons of coal. The first seam—one of two that can be

economically worked out of several seams that occur in the Miiké field - averages 8 feet in thickness of pure solid coal, without any interstratified bands of shale. The mines in this seam are so free from explosive gases that naked lights are invariably used with impunity. The other, a 6-feet seam, is from 6 to 10 feet below the first. It is the 8-feet seam alone that is at present being worked on an extensive scale, the produce of the other being of a somewhat inferior quality, though free-burning and non-caking. It is in demand mainly for local consumption.

GOVERNMENT IRON FOUNDRY.

The work of establishing this at Yuwata village, Onga district, in the Prefecture of Fukuoka, was begun in 1896, and the intention was to finish it by 1899, or at latest in 1900, at a gross expenditure of £409,000.

In the financial year 1898-99 an additional outlay, however, of £647,000 was asked for and agreed to.

By the date originally fixed it had become practicable to institute some trial manufactures, and some smelting work was entirely successful. But then the need arose for floating capital to keep the foundry going.

It was further discovered that the supplies of iron ore, coal, lime, etc., drawn from private sources alone, would be inadequate if the scope of the undertaking was to be profitably enlarged. It would even be advantageous, it seemed, for the foundry itself to own the mines needed for its supply, and accordingly the Government bought the mining property that was deemed to be necessary, and took steps, moreover, to improve the harbour accommodation at Wakamatsu, which is destined to be the place of shipment for the foundry's products.

Altogether the establishment of the Zuwata foundry has cost the country £1,920,269. The appropriation for working it in the period 1899-1900 was £284,516.

The sources of revenue from which these expenditures were met were as follows :

	£
Paid out of the Chinese indemnity ...	57,976
Paid from the proceeds of public loans ...	1,862,293
	<hr/>
	1,920,269

That the money has been well laid out cannot be doubted for a moment. To mention only two items of its calculated output—rails and sheet-iron—is to indicate a sphere of usefulness the limits of which it would be impossible to forecast. Japan itself is only partially provided with railways—in Yezo and Formosa the demands are such as it will be the work of decades adequately to meet—and rails will be perpetually in request, for old lines as well as for new. Experts predict that the Yuwata Iron Foundry will prove to be one of Japan's most remunerative investments. When completed and in full working order it will afford employment to 1,500 workmen.

Yuwata village is 6 miles from Moji, and in another section of this book the importance of Moji as a coal-shipping port is briefly alluded to. The selection of Yuwata as a site for the foundry, within easy reach of ample railway-borne coal supplies, is therefore intelligible, and with the completion of the harbour improvements at the adjacent port of Wakamatsu the foundry will be equipped with adequate means by sea and land for the disposal of its products.

At present vessels drawing no more than 12 feet of water can go alongside the Wakamatsu wharf, but by dredging a depth of 20 feet is ultimately to be attained, and the shipment of iron manufactures in ocean-going vessels will be rendered easy of accomplishment.

It is a long stride from the building of merchant steamers to the construction of line-of-battle ships, but it has all along been Japan's ambition to become independent of Europe in respect of the provision of ironclads, and she is at the present moment taking a first step in the desired direction. At the Naval Arsenal of Kure, which is situated on an inlet near Hiroshima, in the Inland Sea, extensive works are in course of construction in which the manufacture of iron and steel plates is to be carried on by the Ministry of Marine. The plant is to cost altogether over £647,000, the outlay being spread over five years, and an appropriation equal to £110,470 was made for this purpose in the financial proposals for the current year. Kure is a position of great natural defensive strength, the approaches thereto on all sides being narrow, and these have been amply fortified and rendered impassable by any hostile squadron. It is behind this rampart that Japan will eventually roll the armour-plates needed for her ships of war.

• Japan is not a gold-producing country on a large scale. 'The

abundance of gold coins in the country in past days,' declares Count Matsukata, 'was due probably to the importation of gold in connection with various warlike expeditions to neighbouring countries.' On this basis it might be held that Korea was at one time to the Japanese a fruitful source of supply.

The Department of Agriculture and Commerce, however, records an increasing output from purely Japanese sources year by year during the past two decades, rising from 9,744 oz. Troy in 1881 to 37,336 oz. in 1898. This latter total, of course, includes Formosa's yield, and it is said that there are over 2,000 diggers at work in that island.

The total annual production may now be set down at about 40,000 oz., having a value, approximately, of £155,500. Half of this comes from Formosa.

It is recognised in Japan that the gold reserve will have to be replenished in future not only from the domestic output indicated above, but from that of neighbouring countries, and careful examination has shown that Korea's production may at the present day be expected to attain a value of £250,000 sterling, whilst that of China may be anywhere between £720,000 and £960,000. Australian gold, moreover, passes in large quantities to Europe through Hong Kong, and Count Matsukata believes that it will not be difficult to change the direction of its flow. At all events, it is clear that the importance to Japan of pursuing a sound commercial policy is fully comprehended by its leading statesmen, and that its future will not be prejudiced by any lack of financial ability in those who have the conduct of its affairs. Every provision that foresight and experience can suggest in order to secure the national prosperity upon the basis of a gold standard has already been made by those in power.

SECTION XII.

COMMERCIAL EDUCATION.

AMONG the establishments founded by the State there is at the capital, under the direction of the Ministry of Public Instruction, a Higher School of Commerce, on the staff of which are 40 Japanese and 7 foreign professors. The students number 569.

The Normal School of Commerce has 19 Japanese professors.

There is, moreover, a School of Arts and Trades, which has a staff numbering 48 in all, with 347 pupils, and a junior school attached thereto with 10 on its staff and 110 pupils.

The normal school in the same branch of education has a staff of 21, with 75 students, and there is a preparatory school attached thereto with a staff of 3 Japanese and 30 pupils.

A school of the same kind exists at Osaka, with a staff of 25 Japanese and 196 students.

The School of Foreign Languages at Tokio is a flourishing institution, with a staff, all told, of 36, including 12 foreign professors, and 473 students.

At Sapporo, the chief city of the island of Yeso, there is an Agricultural College, with a staff of 30 Japanese and 230 students.

There are 16 other commercial schools in Japan, the teaching staff of which numbers 220, with 4,396 pupils.

In the preparatory technical schools of the empire, public and private, there are in the department devoted to commercial education :

4 schools, with 16 foreign teachers and 365 pupils in Central Nippon.					
1 school	„	1 teacher and	22	„	Northern „
17 schools	„	3 foreign teachers	1,281	„	Western „
5	„	3	191	„	Kiushiu.
27		23	1,859		

In the year 1895 the pupils of these schools numbered 1,212, and the teachers only 11. There were at that time but 20 schools, instead of 27.

Under the control of the Ministry of Communications there are three schools for the mercantile marine—one at the capital, one at Osaka, and one at Hakodate, and there is also a Postal Telegraphs School at Tokio belonging to the same department.

As evidence of the spread of commercial education it should be recorded that the printed works published in twelve months of 1898 numbered, in connection with—

Agriculture	...	...	933	Geography	...	...	421
Industries, various	...	...	285	Navigation	...	...	26
Commerce in general	...	...	871	Languages	...	...	249

These figures have even been exceeded in more recent years.

Not long since it was proposed that the Higher Commercial School of Tokio should be raised to the rank of a university, and degrees of Shogiyo Hakasé (Doctor of Commerce) granted. But it was contended by at least one practical statesman in the Japanese Cabinet that neither these degrees nor those of jakushi (professor) or hakasé (doctor) would be of much value in the eyes of merchants, who above all things desire that their young men should possess a thoroughly practical knowledge of business.

There was in the spring of 1901 a conference at Tokio of the principals of commercial schools gathered from all parts of the empire, and it is expected that a summary of the proceedings will presently be published.

SECTION XIII.

THE COMMERCIAL SITUATION.

COMMERCE rather than politics occupies at the present day the attention of the bulk of the Japanese people. There was at one time a disturbing factor in the presence of the *soshi*, a class avowedly opposed to law and order, which had gathered to itself men ripe for any kind of mischief. But public opinion and the repressive measures instituted by the Government combined to check the growth of this malevolent organization, and it has ceased to be an element of danger to the State.

The undertakings of the Japanese Government since 1896 have covered a wide field. They include, as we have seen, a vast expansion of the naval and military armament, the establishment of an iron foundry, the improvement and extension of railways, the extension of the telephone service, of telegraph and navigation lines, the foundation of the Kyoto Imperial University, of various schools and colleges, including a Higher Agriculture and Forestry School, the establishment of the Industrial Bank of Japan, of local industrial banks, of the Bank of Formosa, of the Hokkaido (Yezo) Colonial Bank, a scheme of river works, and other measures for the encouragement of industry, agriculture, and commerce. In all the aim of the Government has been, directly or indirectly, the industrial development of the country and the augmentation of the national wealth. The entire programme for the increased taxation rendered necessary by these undertakings has been put into operation, and the equilibrium between the national expenditure and receipts was restored in the Budget of 1900-01. Under the earlier portions of that programme certain registration duties and a business tax were imposed. the tax on *saké* (native wine) was increased, and a Government monopoly was created in leaf tobacco, which it was calculated would

prove lucrative. The later provisions of the programme led to considerable opposition in the Diet, but they were finally agreed to, after the Government had made some concessions. The demand for increased revenue was ultimately met by additional taxes on land, income, *soy*, *saké*, and registration; by revenues from the leaf tobacco monopoly and the posts and telegraphs; and lastly, by newly introduced tonnage dues and a tax on convertible bank-notes. All these items together augmented the revenues by some £4,202,000.

The taxes on confectionery, boats, carts, etc., were abolished as a set-off against the introduction of the business tax. The revision of the legal valuation of lands was promised as a set-off against the increased land tax. In all cases the obvious desire of the Government was to foster the national resources of the country whilst securing a firm basis for the national revenue. Its avowed aim was to avoid as far as possible the evils of unequal distribution of taxes.

That which Japan needs is capital. Her resources, mineral and otherwise, should suffice to establish her prosperity for all time. It was the scarcity of money for mercantile purposes, due to outflow of specie, and the resultant high rate of interest, as has been shown elsewhere in this handbook, that checked her progress in 1900. Gold coin and bullion were exported in that year to the extent of £5,283,998; it was mainly towards India and the United States that the drain of gold yen occurred. Only £915,402 worth came in. Nevertheless, the volume of trade was greater in 1900 than in any previous year. The grand total was £50,193,541. And as the adverse conditions were transient, and have already given place to circumstances more propitious, and as the trade of the country grows in proportion to the national requirements, whilst the eagerness to advance manifested by all classes continues unabated, it may confidently be predicted that a great and permanent expansion of her trade awaits Japan in the near future. Politically, she is already one of the Great Powers; commercially, she will assuredly vindicate before long her claim to be accorded a place among the most enterprising of the world's traders.

APPENDIX.

LIST OF CONSULS AND AGENTS IN GREAT BRITAIN AND UNITED STATES.

GREAT BRITAIN.

LONDON : Consul-General, Minoji Arakawa, 84, Bishopsgate
Street Within, E.C.
GLASGOW : Honorary Consul, A. R. Brown.
MIDDLESBOROUGH : Honorary Consul, Waynman Dixon.

UNITED STATES.

NEW YORK : Consul-General, Sadatzuchi Uchida.
SAN FRANCISCO : Consul, Kisaburo Uyeno.
SEATTLE : Consul, Sotokichi Hayashi.
CHICAGO : Consul, Toshiro Fujita.
HONOLULU : Acting-Consul-General, Miki Saito.
MANILA : Vice-Consul, Goro Narita.
PHILADELPHIA : Honorary Consul, A. J. Ostheimer.
NEW ORLEANS : Honorary Consul, J. W. Philips.

ESTABLISHED FOREIGN FIRMS.

YOKOHAMA.

American Trading Co., New York.
Canadian Pacific Railway Co. (Royal Mail S.S. Co.).
China and Japan Trading Co.
The Cotton Export and Import Co. Head Office, New York. Geo. W. Colton,
Yokohama.
Compañia General de Tabacos de Filipinas.
Corney and Co. (London).
Curnow and Co. (London).
Dodwell and Co., Limited (London); also at Vancouver, Seattle, Tacoma, and
Portland (Oregon).

Equitable Life Assurance Society of United States (J. T. Hamilton, manager).
 Flint, Kilby, and Co. (London).
 Fraser, Farley, and Co. (Boston, United States).
 Frazar and Co. (New York).
 Geen, Evison, Stutchbury and Co. (London).
 Hellyer and Co. (Chicago).
 Hong Kong and Shanghai Banking Corporation.
 Hunt and Co. (London).
 R. Isaacs and Brother (New York).
 Japan Import and Export Commission Co. (New York and London).
 Geo. H. Macy and Co. (New York : Carter, Macy, and Co.)
 Mendelson Brothers (San Francisco).
 Mourilyan Heimann and Co. (New York).
 Occidental and Oriental Trading Co., Incorporated (New York).
 Occidental and Oriental S.S. Co.
 Pacific Mail S.S. Co.
 Priest, Marians, and Co., Limited (London).
 A. S. Rosenthal and Co. (New York).
 John C. Siegfried and Co. (San Francisco and Chicago).
 Standard Oil Company of New York.
 Samuel Samuel and Co. (London).
 Wm. Strachan and Co., Limited (London).
 Vacuum Oil Company (Rochester, N.Y.)
 Vivanti Brothers (New York).
 Walsh, Hall, and Co. (New York).

KOBÉ.

Averill Olmsted and Co. (New York).
 Boyes and Co. (Europe).
 E. H. Hunter and Co. (London).
 McKay and Co. (New York).
 Pollak Brothers (New York and London).
 S. Reich and Co. (New York).
 H. E. Reynell and Co. (London).
 E. D. Sassoon and Co. (London and Bombay).
 Singleton, Benda, and Co. (London).
 Skipworth, Hammond and Co. (London).

FOREIGN BANKS ESTABLISHED OR REPRESENTED IN JAPAN

Bank of China and Japan, Limited.
 Chartered Bank of India, Australia, and China.
 Hong Kong and Shanghai Banking Corporation.
 Mercantile Bank of India, Limited.
 National Bank of China, Limited.
 Russo-Chinese Bank.

Banque de l'Indo-Chine. .
 Bergisch Markische Bank.
 Comptoir National d'Escompte de Paris.
 Deutsche Asiatische Bank.
 Jacob E. Dybwad Bank.

CONSULATES.

Austro-Hungary.	Netherlands.
Belgium.	Norway. •
China. •	Portugal.
Denmark.	Russia.
France.	Spain.
Germany.	Sweden. •
Great Britain.	United States of America.
Italy.	

WORKMEN'S WAGES.

According to the most recent official calculation the average wages of Japanese artisans, day labourers, agricultural labourers, and domestic servants, taking the whole empire, save Formosa, into account, were for the years 1895-98, inclusive, as follows :

PER DAY.					1895.	1896.	1897.	1898.
					¥.	d.	d.	d.
Carpenters, who rank highest among artisans					9	10 $\frac{3}{4}$	12 $\frac{1}{4}$	13 $\frac{1}{2}$
Joiners					8 $\frac{3}{4}$	9 $\frac{3}{4}$	11 $\frac{1}{4}$	12 $\frac{1}{4}$
Plasterers					9 $\frac{1}{4}$	10 $\frac{3}{4}$	12 $\frac{1}{4}$	13 $\frac{1}{4}$
Stonemasons					10 $\frac{1}{2}$	11 $\frac{3}{4}$	13 $\frac{3}{4}$	14 $\frac{1}{2}$
Sawyers					9 $\frac{1}{4}$	10 $\frac{1}{2}$	12 $\frac{1}{2}$	13 $\frac{1}{2}$
Thatchers and shinglers					8 $\frac{3}{4}$	10 $\frac{1}{4}$	12	13
Tilers					9 $\frac{1}{2}$	11 $\frac{3}{4}$	13 $\frac{1}{2}$	14
Brick-makers					11 $\frac{3}{4}$	11 $\frac{1}{2}$	14	14 $\frac{1}{4}$
Mat-makers					8 $\frac{3}{4}$	9 $\frac{3}{4}$	11	11 $\frac{3}{4}$
Screen-makers					9	10	11 $\frac{1}{2}$	12 $\frac{3}{4}$
Paperhangers					8 $\frac{1}{4}$	10	11 $\frac{1}{4}$	12 $\frac{1}{2}$
Coopers					7 $\frac{1}{2}$	8 $\frac{3}{4}$	9 $\frac{1}{2}$	10 $\frac{3}{4}$
Clog-makers					7 $\frac{3}{4}$	8 $\frac{1}{4}$	9 $\frac{1}{2}$	10 $\frac{1}{4}$
Boot and shoe makers					9 $\frac{3}{4}$	10 $\frac{1}{4}$	11 $\frac{1}{2}$	12 $\frac{3}{4}$
Saddlers and harness-makers					9	10	11 $\frac{1}{2}$	12 $\frac{1}{4}$
Cartwrights, wheelwrights					8 $\frac{1}{4}$	9	10 $\frac{1}{4}$	12

PER DAY—continued.

				1895.	1896.	1897.	1898.
				d.	d.	d.	d.
Tailors, native style	...	...	...	8 $\frac{1}{4}$	9	9 $\frac{1}{4}$	10 $\frac{1}{4}$
„ foreign style	...	...	...	10 $\frac{3}{4}$	14 $\frac{1}{4}$	14 $\frac{1}{2}$	15 $\frac{1}{4}$
Bag and pouch makers	...	...	...	8 $\frac{1}{4}$	8 $\frac{1}{2}$	10 $\frac{1}{4}$	10 $\frac{1}{4}$
Dyers	...	...	...	7 $\frac{1}{4}$	7 $\frac{3}{4}$	8 $\frac{1}{4}$	9 $\frac{1}{4}$
Blacksmiths	...	...	...	8 $\frac{3}{4}$	10 $\frac{1}{2}$	12	12 $\frac{1}{4}$
Jewellers	...	...	...	9 $\frac{1}{4}$	9 $\frac{1}{2}$	10 $\frac{1}{2}$	11 $\frac{1}{2}$
Metal-workers	...	...	...	9 $\frac{1}{4}$	10 $\frac{1}{4}$	12	13
Lacquerers	...	...	...	8 $\frac{3}{4}$	9 $\frac{1}{2}$	11 $\frac{1}{4}$	11 $\frac{3}{4}$
Oil-pressers	...	...	...	7 $\frac{1}{4}$	7 $\frac{3}{4}$	9 $\frac{1}{4}$	11
Paper-makers	...	...	...	5 $\frac{1}{2}$	6 $\frac{1}{2}$	8 $\frac{1}{4}$	19 $\frac{1}{4}$
Tobacco-choppers	...	...	...	7 $\frac{1}{2}$	8 $\frac{1}{2}$	10 $\frac{1}{2}$	0 $\frac{3}{4}$
Compositors	...	...	...	8 $\frac{1}{4}$	8 $\frac{1}{2}$	9	9 $\frac{3}{4}$
Printers	...	...	...	7 $\frac{1}{2}$	8 $\frac{1}{2}$	8 $\frac{3}{4}$	9 $\frac{1}{4}$
Ship-carpenters	...	...	...	9 $\frac{1}{2}$	11	12 $\frac{1}{2}$	14 $\frac{1}{2}$
Gardeners	...	...	...	8 $\frac{1}{2}$	9 $\frac{1}{2}$	11 $\frac{3}{4}$	13 $\frac{1}{4}$
Agricultural day-labourers, men	...	...	...	5 $\frac{1}{2}$	6 $\frac{1}{4}$	7 $\frac{1}{2}$	8 $\frac{1}{4}$
„ „ women	...	...	...	3 $\frac{1}{2}$	4	4 $\frac{3}{4}$	5 $\frac{1}{2}$
Silkworm rearers, men	...	...	...	6	6 $\frac{3}{4}$	8 $\frac{1}{4}$	8 $\frac{3}{4}$
„ „ women	...	...	...	3 $\frac{3}{4}$	4 $\frac{1}{2}$	5 $\frac{1}{4}$	6
Silk-spinners, women	...	...	...	4 $\frac{1}{2}$	5 $\frac{1}{4}$	5 $\frac{3}{4}$	6
Weavers, men	...	...	...	5 $\frac{1}{2}$	6	6 $\frac{3}{4}$	9 $\frac{1}{2}$
„ women	...	...	...	3 $\frac{3}{4}$	4	4 $\frac{3}{4}$	5 $\frac{3}{4}$
Tea-firers and packers, men	...	...	...	9 $\frac{1}{4}$	10 $\frac{1}{2}$	11 $\frac{1}{4}$	12
Fishermen	...	...	...	7 $\frac{1}{4}$	8 $\frac{1}{4}$	9 $\frac{1}{4}$	10
Miners	...	...	...	9 $\frac{1}{2}$	9 $\frac{3}{4}$	12	13 $\frac{1}{4}$
Day-labourers, general	...	...	...	6 $\frac{1}{2}$	7 $\frac{1}{2}$	8 $\frac{1}{2}$	9 $\frac{1}{2}$

PER MENSEM.

		1895.		1896.		1897.		1898.	
		s.	d.	s.	d.	s.	d.	s.	d.
Brewers of <i>saké</i> (native liquor)	...	16	8	17	5	19	10	22	11
„ <i>soy</i> (native sauce)	...	13	9	15	7	16	10	18	7
Confectioners	...	15	6	18	6	19	5	23	9
Domestic servants, male	...	4	5	5	2	5	6	5	11
„ „ female	...	2	7	2	10	3	2	3	6

PER ANNUM.

		1895.			1896.			1897.			1898.		
		£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Agricultural labourers, male	...	2	16	0	3	4	3	3	10	7	3	17	10
Agricultural labourers, female	...	1	10	6	1	13	3	1	19	4	2	3	0.

Wages all round are higher in Yezo than elsewhere, save in Tokio, the capital, where the average per day is from 40 to 60 per cent. higher than the general average for the entire country. Printers and compositors, for example, earn in Tokio as much as a shilling a day.

CURRENT PRICES OF ARTICLES OF MERCHANDISE IN JAPANESE PORTS.

[Based upon the average rates ruling in Tokio, the capital, and in Osaka (Mid-Japan), Nagasaki (Western Japan), and Hakodate (North Japan).]

Articles.	Units of Calculation.	1897.		1898.		1899.	
		s.	d.	s.	d.	s.	d.
Rice - - -	per bushel	4	8	5	3	4	1
Barley - - -	" "	2	0	2	5	1	10
Rye - - -	" "	2	9	3	2	2	5
Wheat - - -	" "	3	2	3	4	2	11
Beans - - -	" "	3	2	3	4	3	5
Saké (rice wine) - -	" gallon	1	3	1	5	1	4½
Tea - - -	" lb.	6¼		7		6½	
Tobacco, leaf - -	" "	3¼		5¼		6½	
Beef - - -	" "	3¼		3¼		4	
White sugar - - -	" "	1¼		1¼		1¼	
Brown " - - -	" "	1¼		1½		1½	
Raw silk, best - -	" "	11	1	11	0	15	6
Petroleum (kerosene) -	" gallon		5½		5½		7
Coal - - -	" ton	13	6	14	6	11	6

NOTE.

Trade names are often a stumbling-block to the Japanese consumer away in the interior. It is not impossible that the establishment in popular favour of any particular brand of goods will partly be brought about by the comparative ease with which the name may be pronounced. There is no 'l' in the Japanese language, so 'London' becomes 'Rantan' or 'Ronton,' and whilst words like 'hero' or 'coin' are easily spoken and remembered, a title such as 'Battle-Ax,' to take one auspicious example, runs the risk, first, of becoming abbreviated into 'Ax,' and then rendered practically

unintelligible as 'Akkisu.' The advertisements in the vernacular press of Japan prove this to be in no sense a fanciful sketch, but a plain statement of an every day occurrence, and from it may be comprehended the diminished chances of securing the popular vote that goods offered under unpronounceable titles must have in competition with others, possibly inferior in quality, which bear names that the average buyer can recognise and recollect. The simpler the title the better, and if lacking an 'l,' better still.

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